SEP 22 1902

IRVING K. POND, DES. LORADO TAFT, SCULPT.

THE INLAND ARCHITECT AND NEWS RECORD

Entered at the Postoffice at Chicago as second-class matter.

CONTENTS.

EDITORIAL:
The Social Feature of the Annual Convention of the American Institute of Architects—Prompt Rebuilding of the Campanile—Successful Lectures by Chicago Architects to Masons' Apprentices 9

THE SELECTION OF BUILDING SITES 10
By Thomas Hawkes, Landscape Architect.

OUR WASHINGTON LETTER 10
By F. W. Fitzpatrick.

LANDSCAPE ARCHITECTS 11
By George F. Pentecost. (Continued from Vol. XXXIX, No. 5, page 39.)

FOUNDATIONS OF THE NEW CHICAGO TRIBUNE BUILDING. 12

THE FALLEN CAMPANILE 14

RAILWAY DEPOTS THAT HARMONIZE 15

A SKETCH OF THE PIONEER AMERICAN VARNISH BUSINESS. 15

PAINTS IN ARCHITECTURE 16

OUR ILLUSTRATIONS 16

ASSOCIATION NOTES 16

MOSAICS 16

NORTH-WESTERN TERRA COTTA CO.

WORKS AND OFFICE:
Clybourn and Wrightwood Avenues.

BRANCH OFFICE: 1118 Rookery Building,
CHICAGO.

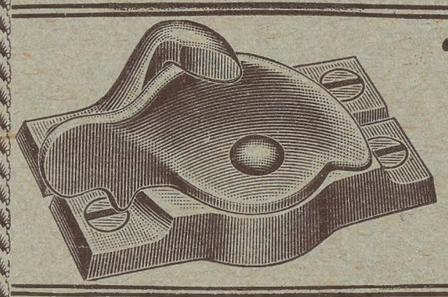
J. W. TAYLOR,

REMOVAL NOTICE:
After May 1, 1902, Monon Bldg., 324 Dearborn St. Telephone No. 1500 Harrison.

ARCHITECTURAL PHOTOGRAPHS,
BUILDINGS, INTERIORS, DETAILS, ETC.

Promise to purchase two dozen from the lot at $4.00 per dozen, unmounted, and I will send 200 from which to make the selection.

FITCH SASH LOCKS



"THE PERFECT WINDOW FASTENER"...

SEND FOR CATALOGUE AND WORKING MODEL

THE W. & E. T. FITCH CO., NEW HAVEN, CONN.

THE WINSLOW BROS. COMPANY

CHICAGO

ORNAMENTAL IRON AND BRONZE AND MONUMENTAL BRONZE STATUARY

THE WINSLOW ELEVATOR & MACHINE CO.

HIGH-GRADE ELECTRIC AND HYDRAULIC ELEVATORS

WANTED—DRAFTSMAN

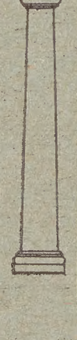
A good, competent draftsman, good at sketching.

HUNT & EAGER, Los Angeles, Cal.

Battle Creek Interior Finish Co., Ltd.

Battle Creek, Mich., U.S.A.

Write us for Veneered Oak Doors and Colonial Columns



PITKIN'S PREMIUM PAINT

FOR PRESERVING AND BEAUTIFYING.

We will be pleased to send a handsome color-card, appropriately framed in Flemish oak, to architects on application.

Geo. W. Pitkin Co.

Station "C," CHICAGO.

Advance News

INDICATING

Chances to Sell

PLANS, FIXTURES,
MATERIALS, FURNITURE,
MACHINERY,

May be secured with promptness, accuracy and thoroughness, and at reasonable rates, from

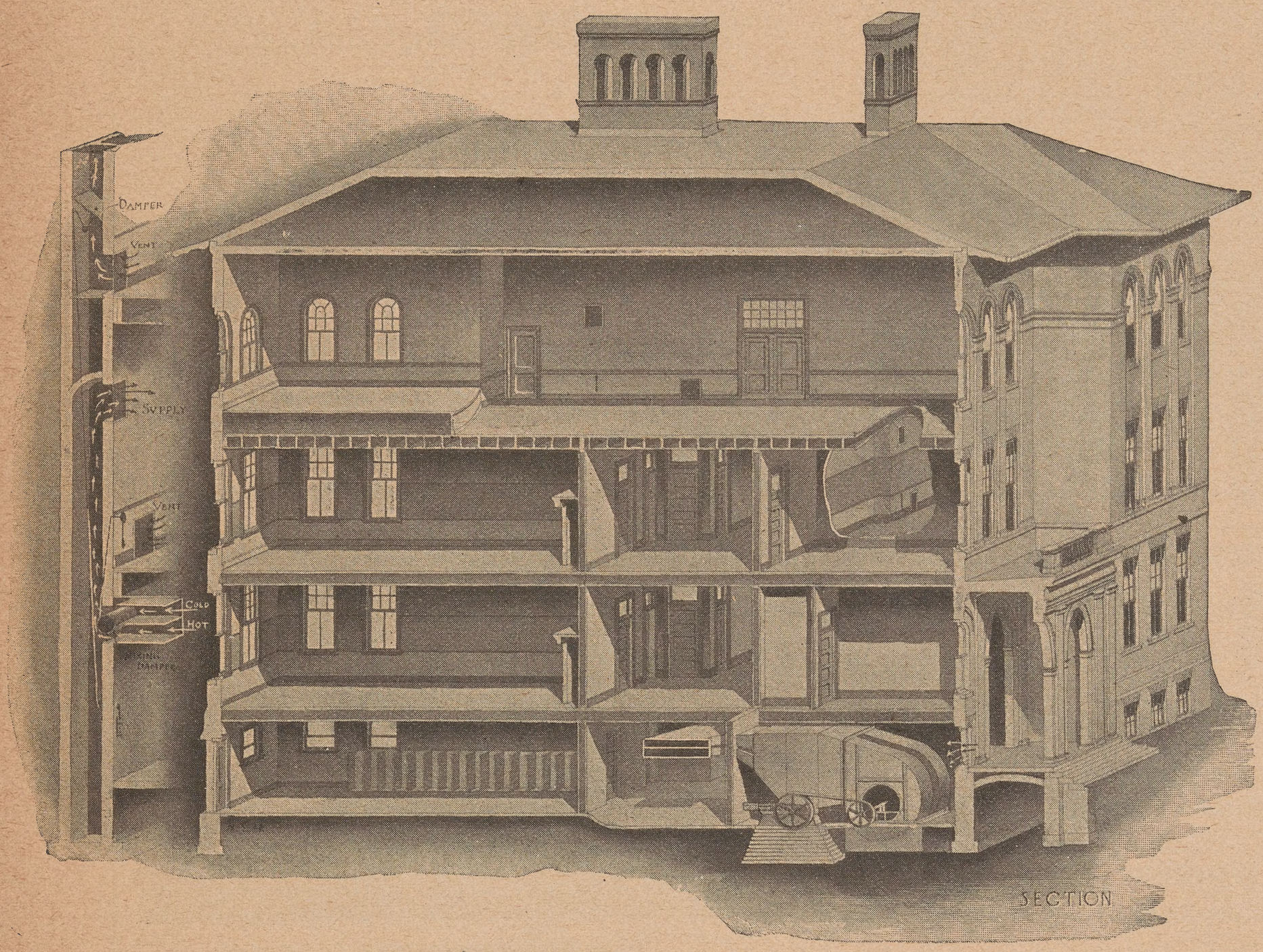
THE PRESS CLIPPING BUREAU,

ROBERT AND LINN LUCE,

78 Park Place, NEW YORK. 68 Devonshire St., BOSTON
Pike Bldg., CINCINNATI. Cooper Bldg., DENVER.

Please mention THE INLAND ARCHITECT when corresponding with Advertisers.

The Sturtevant System



of SCHOOL-HOUSE VENTILATION :: and HEATING

Insures positive ventilation at all times with air properly tempered and thermostatically controlled.

B. F. Sturtevant Company

BOSTON, MASS.

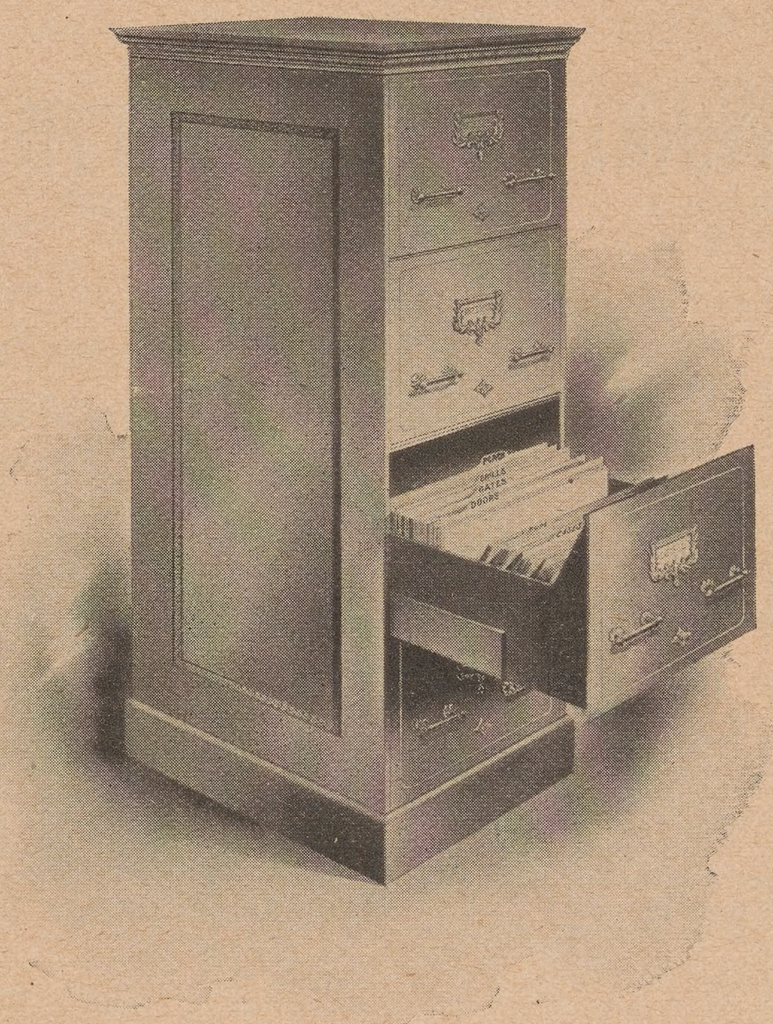
NEW YORK
PHILADELPHIA
CHICAGO
LONDON

The "Taylor Old Style" brand is the STANDARD of all Roofing Tins.

Made only by

N. & G. TAYLOR CO.

Philadelphia.



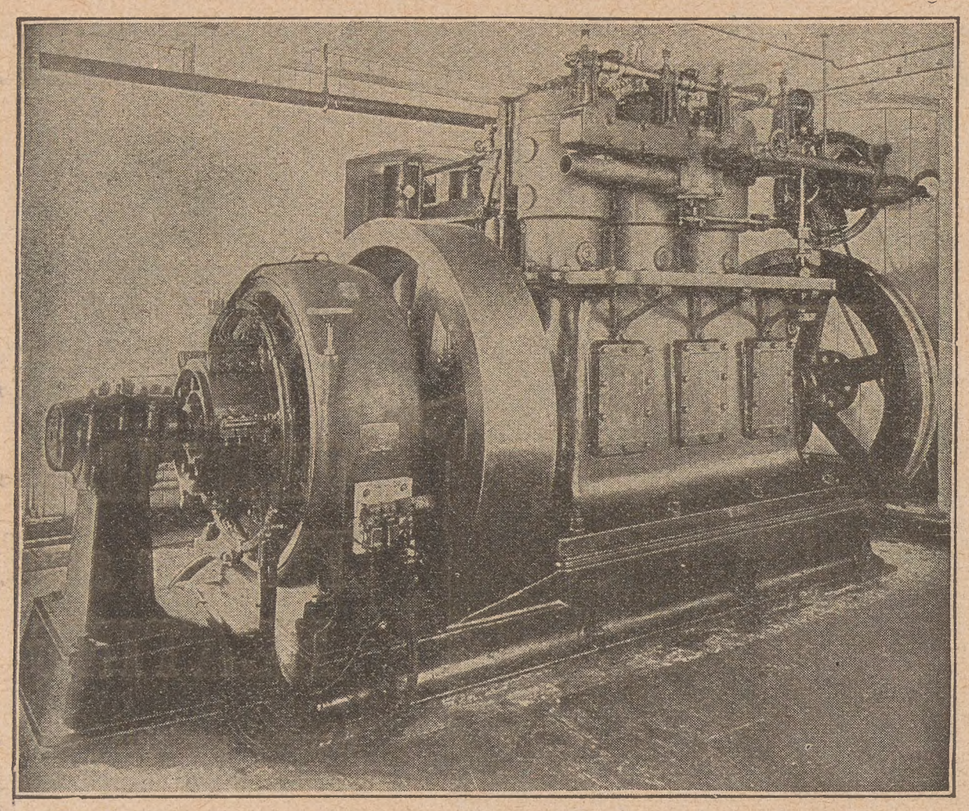
STEEL VERTICAL FILES
FOR
ARCHITECTURAL PLATES "Won't Burn"

BOOKLETS: "Steel Vertical Files." "Types" of Metallic Fixtures.

Art Metal Construction Co.

Jamestown, N. Y.

Chicago Office: Merchants Loan and Trust Bldg.



Westinghouse Gas Engine.

Electric Lighting Plants

For Office Buildings, Schools, Churches and Private Residences

Westinghouse, Church, Kerr & Co.

ENGINEERS,

New York, Boston, Philadelphia, Pittsburg, Chicago, Detroit.

The Westinghouse Machine Co.

Pittsburg—Designers and Builders—Chicago.

Steam Engines, Gas Engines, Steam Turbines, Roney Mechanical Stokers.

No matter how inaccessible the fan, blower or pump it is under perfect control if the motor is a

Westinghouse Multipolar.

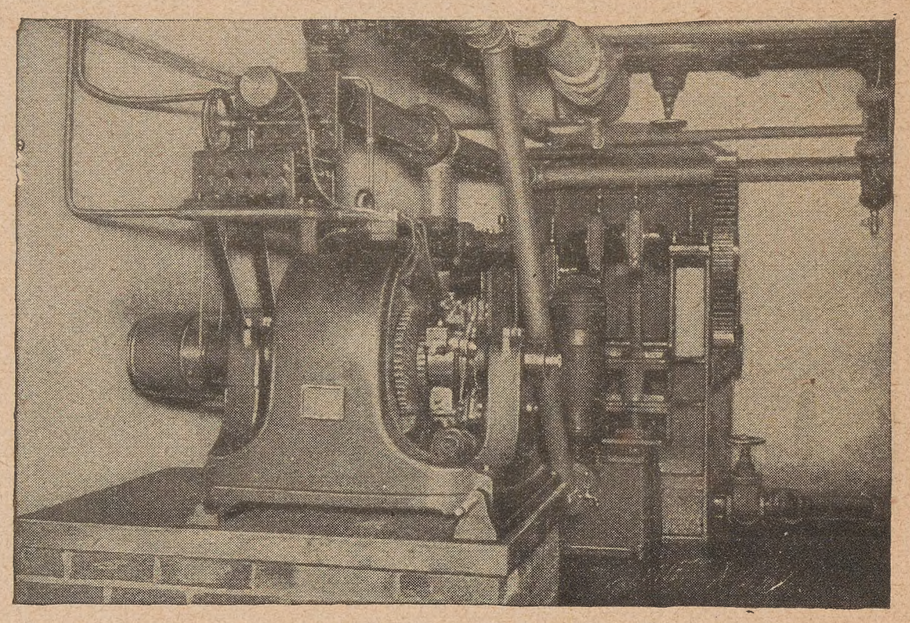
Write for Circular 1042.

Westinghouse Electric & Mfg. Co.

Pittsburg, Pa.

Sales Offices in All Large Cities

30-G



Westinghouse Multipolar Motor Driving Pump.

THE WINKLE TERRA COTTA CO.

MANUFACTURERS OF

Architectural Terra Cotta

IN ALL COLORS.

OFFICE:

Rooms 502 and 503, Century Building,

ST. LOUIS, MO.

Works: CHELTENHAM, ST. LOUIS.

"Of all inventions, the alphabet and printing press alone excepted, those inventions which abridge distance have done most for civilization."

—*Macaulay.*

Map of The New York Central Lines

A system of 11,126 miles of railway in the populous territory east of Chicago, St. Louis and Cincinnati, furnishing luxurious and rapid transportation facilities for more than one half of the entire population of the United States.

Details of rates and trains given by any New York Central ticket agent.

A copy of "America's Summer Resorts," will be sent free, postpaid, on receipt of a postage stamp, by George H. Daniels, General Passenger Agent, New York Central & Hudson River Railroad, Grand Central Station, New York.

Please mention THE INLAND ARCHITECT when corresponding with Advertisers.

TREES and SHRUBS

Now is the time to order

Fine Stock
Prices Right

Illustrated price list free

PETERSON'S NURSERY

164 La Salle St. CHICAGO

TEL. HARRISON 3652

THOMAS HAWKES

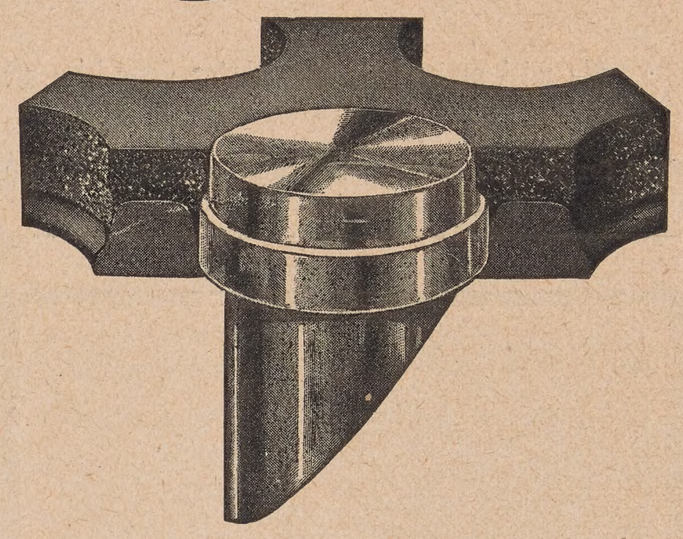
LANDSCAPE ARCHITECT

DESIGNS PREPARED FOR PARKS, CEMETERIES, PRIVATE ESTATES, SUB-DIVISIONS, ETC.

CORRESPONDENCE SOLICITED

1532 MONADNOCK BLOCK CHICAGO

Sidewalk Lights



CONCRETE REFRACTING LENS.

SEND FOR CATALOGUE

Brown Bros. Mfg. Co.

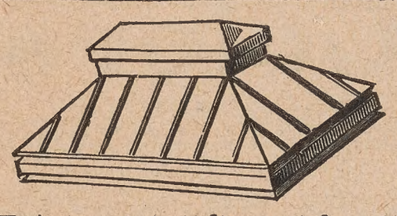
Established in 1860

Main Office and Factory:
Twenty-second Street and Campbell Avenue
Telephone, Canal 115

Branch Office—N. W. Cor. Jackson Boul. and Clinton St.
Telephone, Main 4085

Chicago

Metal Skylights



IF you are "face to face" with the Skylight question, you would find our fully illustrated Catalogue B a great enlightener. We bring to the building of Metal Skylights many years of experience, and our constructive methods entirely overcome all of those undesirable features so constantly connected with ordinary Skylights. Shall we mail it?

VAN NOORDEN COMPANY
944 Massachusetts Avenue
BOSTON, MASS.

A PAINT CONSUMER

in Olympia, Washington, writes us:

"In reference to ZINC WHITE—I fully believe in using it as standard for all painting. Four years since I used half zinc and half white lead; I regret not using all zinc. The painter talked me out of the idea. * * * My next painting will be all zinc, outside and inside."

The truth will popularize itself, despite all efforts to prevent. The truth in regard to painting is that satisfactory work in white or tints can not be done without ZINC WHITE, and this fact is spreading among consumers.

FREE—Our Practical Pamphlets:
"Paints in Architecture,"
"The Paint Question,"
"French Government Decrees."

The New Jersey Zinc Co.

11 Broadway, NEW YORK.

Illinois Central R. R.

ILLINOIS CENTRAL RAILROAD — CENTRAL MISSISSIPPI VALLEY ROUTE

Efficiently serves a vast territory

by through service to and from the following cities:

CHICAGO, ILL.	CINCINNATI, OHIO.
OMAHA, NEB.	NEW ORLEANS, LA.
MINNEAPOLIS, Minn.	MEMPHIS, TENN.
ST. PAUL, MINN.	HOT SPRINGS, ARK.
KANSAS CITY, MO.	LOUISVILLE, KY.
PEORIA, ILL.	ASHVILLE, TENN.
EVANSVILLE, IND.	ATLANTA, GA.
ST. LOUIS, MO.	JACKSONVILLE, Fla.

Through excursion sleeping-car service between Chicago and between Cincinnati

AND THE PACIFIC COAST

Connections at above terminals for the

East, South, West, North

Fast and Handsomely Equipped Steam-Heated Trains—Dining Cars—Buffet-Library Cars—Sleeping Cars—Free Reclining Chair Cars.

Particulars of agents of the Illinois Central and connecting lines.

A. H. HANSON, Gen'l Pass'r Agent, CHICAGO

SOUTHERN PACIFIC

SUGGESTS

CALIFORNIA

PROMISES

Blue Skies, Shining Seas, Snowy Mountains
Vineyards, Orchards, Grain Fields
Wealth, Health, Prosperity, and Happiness

FROM **CHICAGO** **$33**

during September and October

Choice of routes east of Ogden, El Paso and New Orleans.
Highest class tourist car service.

Address any Southern Pacific Agent.
W. G. NEIMYER, GENERAL AGENT, 193 CLARK ST., CHICAGO, ILL.

LOUIS J. MILLET

(Successor to HEALY & MILLET)

Interior Decorator

151 MICHIGAN AVE., CHICAGO

Leaded Glass. Glass Mosaic. Frescoing

Please mention THE INLAND ARCHITECT when corresponding with Advertisers.

YOUR BEST BUILDINGS . . .

REPRODUCED EXACTLY FROM PHOTOGRAPHS BY OUR

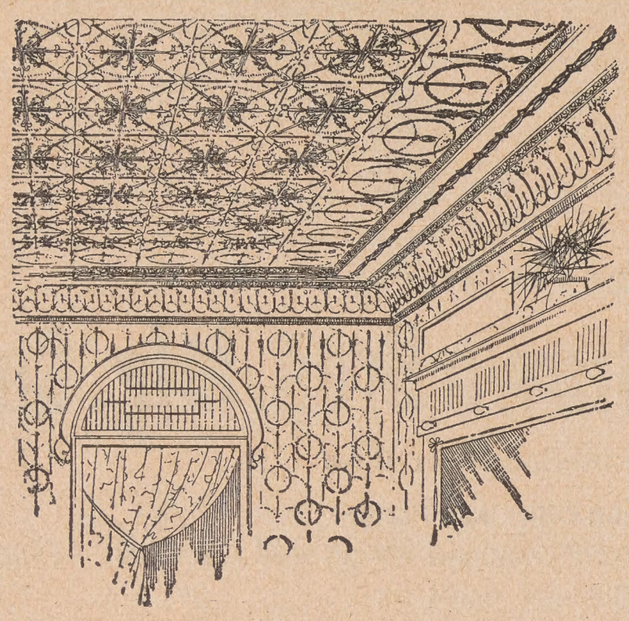
HALF-TONE PROCESS

AND ISSUED IN BOOK OR PAMPHLET FORM WOULD CONSTITUTE AN ATTRACTIVE SOUVENIR, AND A PLEASANT INTRODUCTION TO PROSPECTIVE CLIENTS.

We will make half-tone plates (our best work) at **LOWER PRICES** than you can get elsewhere — probably 30 to 40 per cent less.

Send for prices, stating sizes and number of plates wanted.

INLAND PUBLISHING CO., 610 Manhattan Bldg., CHICAGO.



Berger's Metal Ceilings

Are symmetrical and pleasing to the eye and command the admiration of all. They can be used in all classes of buildings, are easy to apply, and highly ornamental. They don't shrink, crack, get water-soaked, or fall off. They are safe and sanitary. Their durability makes them the most economical ceilings in existence. Our "Classified Designs" embrace a variety of styles, and there is no building that we can not match in its style of architecture. Send for our booklet "A New Idea in Metal Ceilings"—'tis free.

The Berger Mfg. Co., Canton, Ohio

Eastern Branch, 210 E. 23d St., N. Y.
Western Branch, 19-21 S. Main St., St. Louis, Mo.

THE CHEAPEST GOODS
Do not always cost the least.

Established 1844.

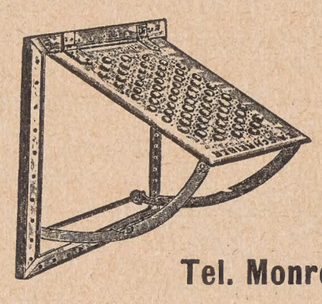
Peerless Mortar Colors

Are the Brightest, Strongest and Most Durable.

THEIR ULTIMATE COST IS THEREFORE THE LOWEST.

SAMUEL H. FRENCH & CO.

Send for Samples. PHILADELPHIA.



AMERICAN SIDEWALK LIGHT CO.

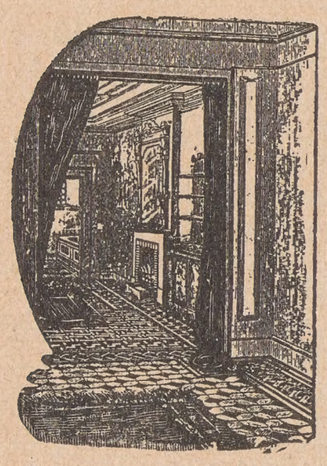
MANUFACTURERS OF ALL KINDS OF

Concrete and Hyatt Sidewalk, Floor and Skylight Work,

AND ALL KINDS OF IRONWORK.

Coal-Hole Covers of every description always on hand.

Tel. Monroe 643. **156-158 West Ohio St., CHICAGO.**



Hardwood Floors

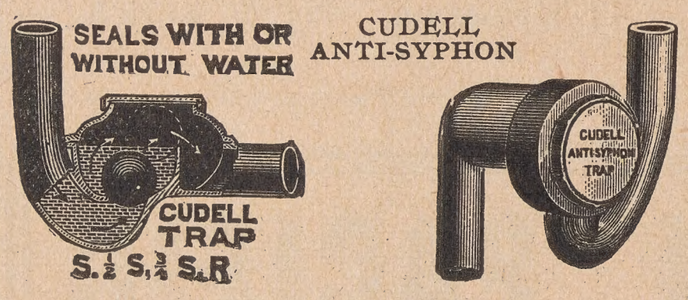
Wood Carpets, Parquet Floors, Rug Borders.

Send for book of designs.

E. B. MOORE & CO.

37 Randolph Street, CHICAGO, ILL.

Put into the White House by the U. S. Government.



F. E. CUDELL'S

Patent Sewer-Gas and Backwater Trap

For Wash-Bowls, Sinks, Bath and Wash Tubs,

CLEVELAND, OHIO.

W. W. ABBOTT,

MANUFACTURER OF

PICTURE FRAMES

MATS AND PASSEPARTOUTS

FRAMES MADE TO ORDER. ARCHITECTURAL DRAWINGS REMOUNTED.

Telephone Harrison 3455 **255 Wabash Ave., CHICAGO**

Hydraulic Press Brick Co.

ST. LOUIS, MO.

TOTAL ANNUAL CAPACITY, 300,000,000 BRICKS.

CHICAGO HYDRAULIC PRESS BRICK CO.,	Chicago, Ill.
CLEVELAND HYDRAULIC PRESS BRICK CO.,	Cleveland, Ohio.
EASTERN HYDRAULIC PRESS BRICK CO.,	Philadelphia, Pa.
FINDLAY HYDRAULIC PRESS BRICK CO.,	Findlay and Toledo, Ohio.
ILLINOIS HYDRAULIC PRESS BRICK CO.,	St. Louis, Mo.
KANSAS CITY HYDRAULIC PRESS BRICK CO.,	Kansas City, Mo.
MENOMONIE HYDRAULIC PRESS BRICK CO.,	Minneapolis, Minn.
NEW YORK HYDRAULIC PRESS BRICK CO.,	Rochester, N. Y.
OMAHA HYDRAULIC PRESS BRICK CO.,	Omaha, Neb.
WASHINGTON HYDRAULIC PRESS BRICK CO.,	Washington, D. C.

W. H. S. Lloyd Co.

REPRESENTING

A. SANDERSON & SONS, OF LONDON.

ENGLISH WALL PAPERS

JAPANESE LEATHERS
GRASS CLOTH

Finest Stock of Foreign Wall Papers in U. S.

26 E. 22d St., New York

Please mention **THE INLAND ARCHITECT** when corresponding with Advertisers.

THE J. W. REEDY ELEVATOR CO.

Passenger and Freight

ELEVATORS.

83 to 91 Illinois Street, CHICAGO.

31-33 Tenth Avenue, NEW YORK CITY.

FOR INFORMATION ABOUT

U. S. MAIL CHUTES

WHICH ARE

A necessity in office buildings and hotels, write to the sole makers,

THE CUTLER M'F'G CO., Rochester, N. Y.

PATENTED. AUTHORIZED.

LAUNDRY MACHINERY.

THE ECHO HAND LAUNDRY,

33 EVANSTON AVENUE.

OTTO HOLMS, PROPRIETOR.

CHICAGO, July 28, 1900.

Chicago Rival Machine Co.,
35-41 E. Indiana St., City.

Gentlemen:

In reply to your letter of recent date, I wish to say that I am very much pleased with your HIGH GLOSS "Rival" Ironer, which I bought from you and which I have used eight months. The machine does very good work. It makes money for us every day.

Yours very truly, OTTO HOLMS.

WANTED One first-class ARCHITECTURAL DRAFTSMAN, one well up in design, and able to render in perspective. None but a first-class man having had experience with first-class architects in this country need answer this advertisement. FREMONT D. ORFF, Minneapolis, Minn.

YOUR SUMMER OUTING

TAKE A LAKE TRIP ON THE PALATIAL STEAMERS

Illinois or City of Charlevoix

...OF THE...

Northern Michigan Transportation Co.

MACKINAC AND RETURN,

$16.00

MEALS AND BERTHS INCLUDED.

The cheapest and best way to spend a vacation. Send for descriptive folder.

R. C. CHURCH, G. P. A.

Docks foot of Michigan St. CHICAGO.

CRANE VALVES

ESTABLISHED 1855

"WHATEVER IS WORTH DOING AT ALL IS WORTH DOING WELL."

Telephone 555

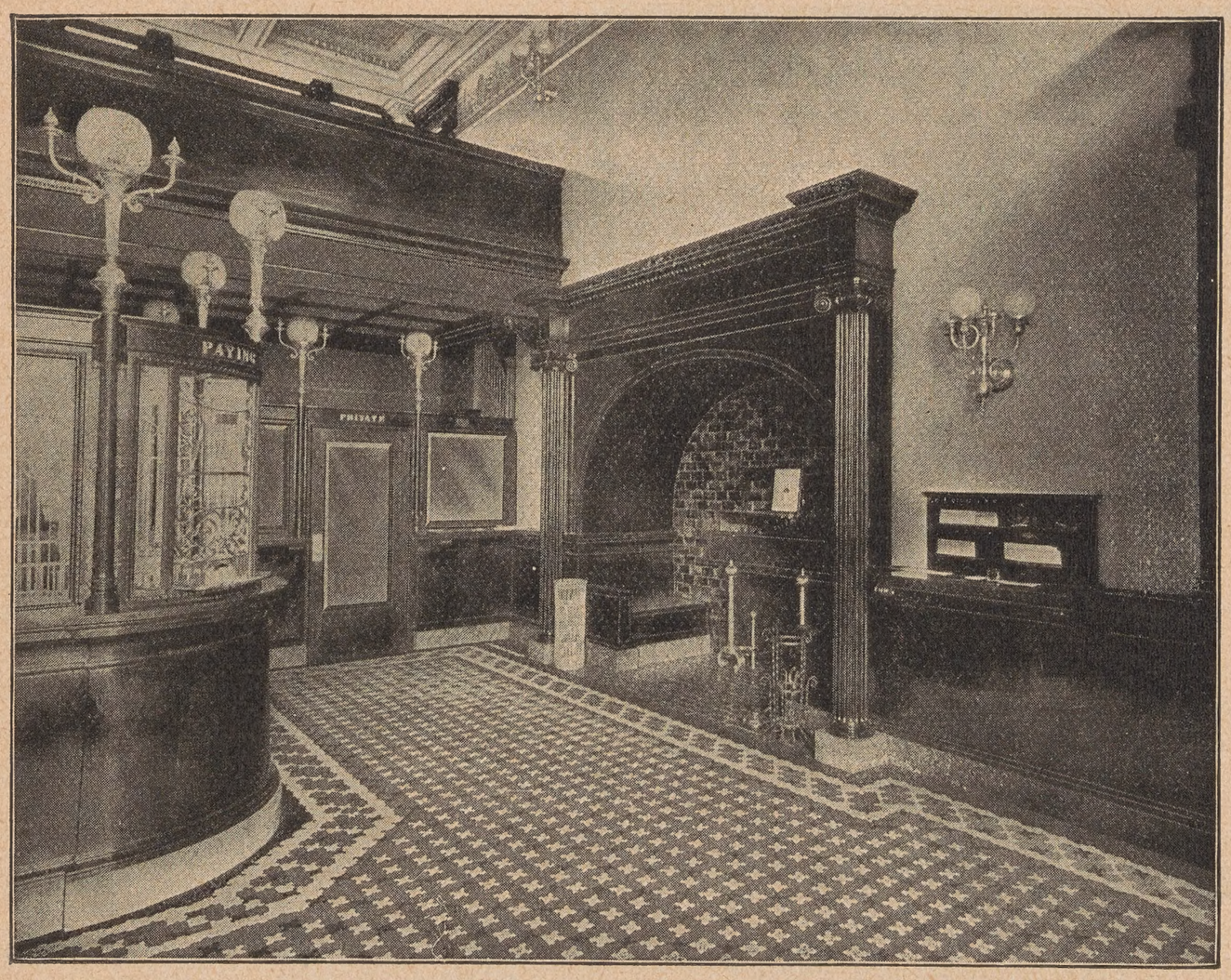
THE HENRY O. SHEPARD COMPANY

212-214 Monroe St. CHICAGO.

Printers, Embossers Blank Book Makers

We do all kinds of Printing and Binding. Rush Work a Specialty.

..Observe typography of THIS JOURNAL as a fair specimen of our grade of work..



Interlocking Rubber Tiling

As laid by us in the lobby of the County Savings Bank & Trust Co., Scranton, Pa.

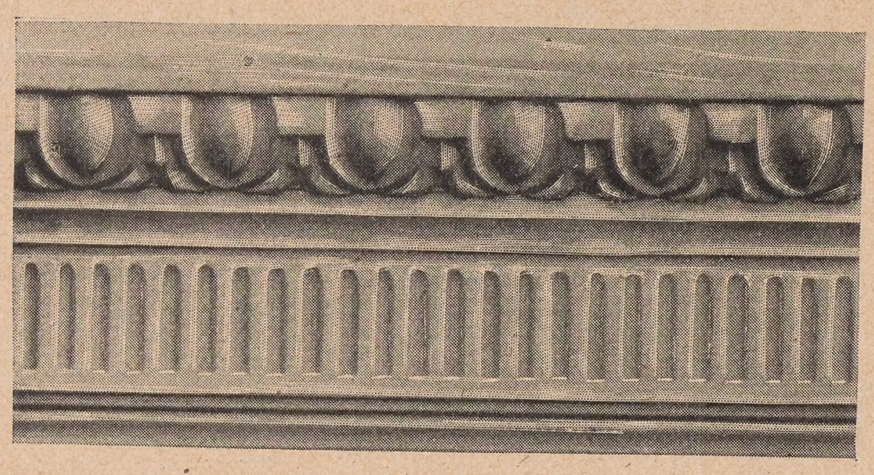
Noiseless, non-slippery, waterproof, sanitary, durable. A perfect floor for offices, banking-rooms, courthouses, schoolrooms, libraries, hospital wards, cafes, bathrooms, billiard-rooms, vestibules, halls, church aisles, piazzas, etc.

Laid directly on wood, stone or iron.

Call or write.

NEW YORK BELTING & PACKING CO., Ltd.

Chicago.....150 Lake Street
New York.....25 Park Place
Philadelphia.....724 Chestnut Street
Baltimore, Baltimore Rubber Co., 101 Hopkins Place
St. Louis.....411 North 3d Street
San Francisco.....509-511 Market Street
London, Eng., The B. & S. Folding Gate Co., 19 to 21 Tower Street, Upper St. Martin's Lane, W. C.



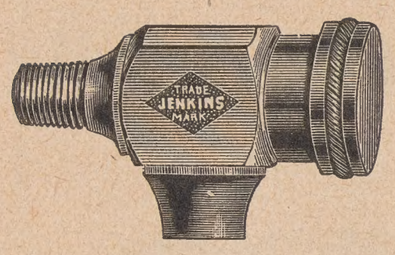
The Real Thing!

CARVED WOOD MOULDINGS

Made by machine. Not pressed or burned; not metal, but wood. These mouldings are more perfect than hand work, and at a very small per cent of cost.

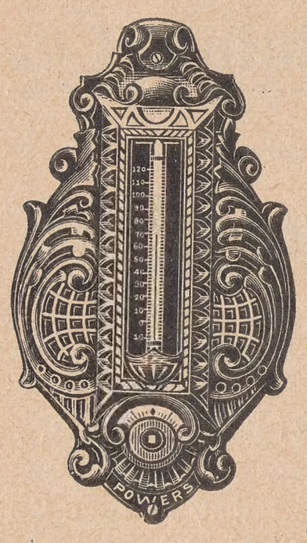
GRAND RAPIDS CARVED MOULDING CO., 30 to 35 Myrtle St., Grand Rapids, Mich.

JENKINS IMPROVED AUTOMATIC AIR VALVES



Suitable for high or low pressure. Take no more room than an ordinary air cock. Endorsed by the leading steam experts as the best made and the quickest working. All genuine stamped with our Trade-Mark.

JENKINS BROTHERS, NEW YORK. BOSTON. CHICAGO. PHILADELPHIA.



Avoid Extremes of Heat and Cold

BY USING

THE POWERS SYSTEM

OF

Temperature Regulation.

Applicable to all kinds of heating apparatus in Schools, Churches, Residences, Office Buildings, etc.

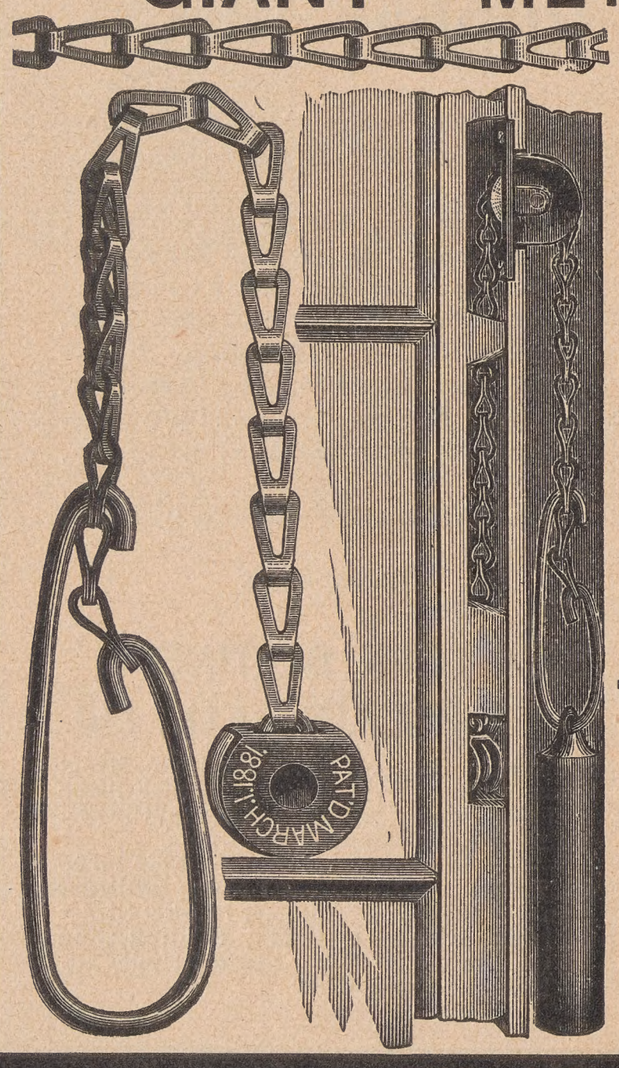
Successfully applied to the control of heat in RAILWAY CARS.

SEND FOR CATALOGUES.

The Powers Regulator Co., 40 Dearborn Street, Chicago.

111 Fifth Avenue, New York. 224 Franklin Street, Boston.

"GIANT" METAL SASH CHAIN



Has not been equaled in quality in 20 years. Durability guaranteed. The bronze costs 40 per cent more than any other Sash Chain metal.

Full line of Sash and Cable Chains, Sash Pulleys and Fixtures.

MANUFACTURED BY

THE SMITH & EGGE MFG. CO.

BRIDGEPORT, CONN.

WRITE FOR OUR LATEST CATALOGUE.

A Profitable Way to see The West

is to join one of the personally conducted California excursions of the Santa Fe Route.

Congenial companions are assured.

Special conductors relieve you of all care and contribute materially to your enjoyment.

No extra charge.

Inquire of

T. A. GRADY,
Manager California Tourist Service,
The Atchison, Topeka & Santa Fe Railway,
109 Adams Street, Chicago.

KINNEAR
STEEL ROLLING
·DOORS·SHUTTERS·
THE KINNEAR MFG. CO.
COLUMBUS OHIO, U.S.A.
BOSTON – CHICAGO – PHILA.
83 WATER ST.— 112 CLARK ST.— 1011 CHESTNUT ST.

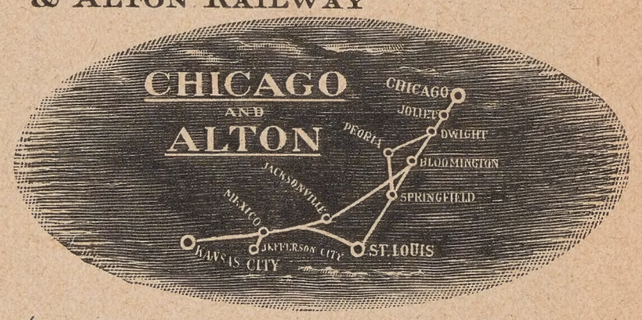
Sheet-Steel Indian Canoes

Non-sinkable and indestructible. 14 feet long, 39 inch beam.

Twenty-Two Dollars, Net. EXTRA FOR FISH BOX AND SECTIONAL BOAT.
W. H. MULLINS, 310 Depot St., SALEM, OHIO.

THE ALTON'S ENGINEER.

IF YOU WILL SEND THE ADDRESS OF A PERSON WHO, WITHIN A YEAR, WILL HAVE USE FOR THE CHICAGO & ALTON RAILWAY



(TERRITORY COVERED OUTLINED IN ABOVE MAP), WE WILL MAIL TO YOU A PICTURE, 4½ X 3 INCHES, OF THE ALTON'S ENGINEER. IF, IN ADDITION, YOU WILL TELL US IN WHAT PUBLICATION YOU READ THIS ADVERTISEMENT, WE WILL SEND TO YOU A PAMPHLET ABOUT THE BIGGEST CAMERA IN THE WORLD.

GEO. J. CHARLTON,
GENERAL PASSENGER AGENT, CHICAGO & ALTON RAILWAY,
CHICAGO, ILLINOIS.

INDEX TO ADVERTISEMENTS.

Architectural Drawing. — Page
Deane, E. Eldon XV

Architectural Iron Works.
The Winslow Bros. Co..... II
American Sidewalk Light Co. IX

Architectural Photographers.
Taylor, J. W..... II

Architectural Views.
Taylor, J. W..... II

Boats.
W. H. Mullins..... X

Boiler Covering.
The Keasbey & Mattison Co. XII

Bricks (Pressed).
Chicago Hydraulic Press Brick Co IX
Findlay Hydraulic Press Brick Co IX
Illinois Hydraulic Press Brick Co IX
Kansas City Hydraulic Press Brick Co IX
Menominee Hydraulic Press Brick Co IX
Omaha Hydraulic Press Brick Co IX
St. Louis Hydraulic Press Brick Co IX

Brick (Enameled).
Hydraulic Press Brick Co ... IX

Brick (Fire).
Vrooman, H. S..... IX

Brick (Ornamental).
Chicago Hydraulic Press Brick Co IX
Findlay Hydraulic Press Brick Co IX
Hydraulic Press Brick Co ... IX
Illinois Hydraulic Press Brick Co IX
Kansas City Hydraulic Press Brick Co IX
Menominee Hydraulic Press Brick Co IX
Omaha Hydraulic Press Brick Co IX

Builders' Hardware.
Orr & Lockett..... XVI
The Yale & Towne Mfg. Co. XVI

Builders' Sundries.
The Yale & Towne Mfg. Co. XVI

Building Papers.
Cabot, Samuel XII

Cements.
French, S. H., & Co VI

Clothes Dryers.

Cordage.
Samson Cordage Works XVI

Creosote Stains.
Cabot, Samuel XII

Decorators' Supplies. — Page
Grand Rapids Carved Moulding Co..... XIII

Drawing Material and Implements.
Abbott, A. H., & Co..... XII

Electric Plants.
Westinghouse, Church, Kerr & Co IV
The Westinghouse Machine Co IV

Elevators.
The J. W. Reedy Elevator Co VII

Elevator Supplies.
Elevator Supply & Repair Co. V

Engineers.
Westinghouse, Church, Kerr & Co IV
The Westinghouse Machine Co IV

Fire Extinguishers.
The Yantacaw Mfg. Co..... II

Fireproof Doors.
Kinnear Mfg. Co. X

Fireproof Shutters.
Kinnear Mfg. Co..... VI

Fireproofing.
National Fireproofing Co .. XIV
Pioneer Fireproofing Co.... XIV
The Roebling Construction Co..... XII

Floor Polish.
Butcher Polish Co XV

Gas Engines.
Westinghouse, Church, Kerr & Co IV
The Westinghouse Machine Co IV

Grilles.
Waddell Mfg. Co..... X

Hardware.
The Yale & Towne Mfg. Co. XVI

Heating.
Buffalo Forge Co..... XIII
B. F. Sturtevant Co III

Heating and Ventilating Apparatus.
Buffalo Forge Co..... XIII
Pierce, Butler & Pierce..... XVI
B. F. Sturtevant Co III

Ice and Refrigerating Machinery.
Westinghouse, Church, Kerr & Co IV
The Westinghouse Machine Co IV

Interior Finish.
Battle Creek Interior Finish Co II

Locks.
The Yale & Towne Mfg. Co. XVI

Mail Chutes.
Cutler Manufacturing Co... VII

Mechanical Stokers.
Westinghouse, Church, Kerr & Co IV
The Westinghouse Machine Co IV

Metal Ceilings. — Page
Berger Mfg. Co VI

Metallic Fixtures and Furniture.
Art Metal Construction Co . III

Monuments.
Blake, Chas. G., & Co..... XII

Mortar Colors.
French, S. H., & Co..... IX

Moldings, Mirrors, Frames.
Grand Rapids Carved Moulding Co..... X
W. W. Abbott..... IX

Paints, Oils and Varnishes.
Berry Bros III
Joseph Dixon Crucible Co.. XV
New Jersey Zinc Co V
Pitkin, Geo. W., Co..... II
Smith, Edward, & Co XVI

Pencils.
Joseph Dixon Crucible Co .. VI

Plumbers' Fittings.
Crane Co..... VI, XIV

Printers.
The H. O. Shepard Co VII

Railroads.
Big Four Route XV
Chicago & Alton..... X
Chicago & North-Western R'y X
Chicago, Milwaukee & St. Paul..... IX
Delaware, Lackawanna & Western XIV
Denver & Rio Grande R. R. XV
Grand Trunk Lines IX
Illinois Central V
Monon and C. H. & D. Route VIII
Missouri Pacific R'y VIII
New York Central R. R..... IV
Queen & Crescent Route.... XIV
Rio Grande & Western..... VI
Southern R'y XIV
Southern Pacific Co... V
Santa Fe Route X
Wisconsin Central..... XV

Reflectors.
Frink, I. P..... XV

Roofing Tin.
N. & G. Taylor Co III

Rolling Doors and Shutters (steel).
Kinnear Mfg Co X

Sanitary Appliances.
Cudell, F. E..... IX

Sash Cords and Chains.
Smith & Egge Mfg. Co VIII
Samson Cordage Works.... XVI

Sash Locks.
The W. & E. T. Fitch Co.... II

Schools.
Washington University..... X

Sheathing and Deadening Quilt.
Cabot, Samuel XII

Shingle Stain.
Berry Bros XIII
Cabot, Samuel XII
Dexter Bros..... XV

Sidewalk and Vault Lights. — Page
Brown Bros. Mfg. Co V
Richards & Kelly..... VII
American Sidewalk Light Co. IX

Skylights (Metal).
Van Noorden Co..... V

Snow Guards.
Folsom Snow Guard Co..... X

Spring Hinges.
Smith & Egge Mfg. Co..... X

Stained and Decorative Glass.
Louis J. Millet V

Steam Engines.
Westinghouse, Church, Kerr & Co IV
The Westinghouse Machine Co IV

Steam Fittings.
Crane Co..... XV

Steam Loops.
Westinghouse, Church, Kerr & Co IV
The Westinghouse Machine Co IV

Steel Rolling Doors.
Kinnear Mfg. Co VIII

Steel Rolling Shutters.
Kinnear Mfg. Co..... VIII

Steel Shutters.
American Sidewalk Light Co. IX
Kinnear Mfg. Co X

Stokers.
Westinghouse, Church, Kerr & Co IV
The Westinghouse Machine Co IV

Stone (Artificial).
Niemann, Geo VII

Temperature Regulator.
The Powers Regulator Co... VIII

Terra Cotta.
Northwestern Terra-Cotta Works II
Winkle Terra Cotta Co IV

Tile (Enameled).
Tiffany Enameled Brick Co.

Tile (Rubber).
New York Belting & Packing Co., Ltd..... VII

Trees.
Peterson, P. S., & Son..... V

Valves (Steam).
Jenkins Bros..... X
Crane Co..... VII, XIV

Varnish.
Chicago Varnish Co..... X

Ventilation.
Buffalo Forge Co..... XIII

Wall Papers.
W. H. S. Lloyd Co..... IX

Window Lines.
Samson Cordage Works.... XVI

Wood Carpet.
Moore, E. B., & Co..... VI

The Pioneer Limited

Famous Train of the World.

Chicago — St. Paul — Minneapolis

VIA

THE ST. PAUL ROAD

(Chicago, Milwaukee & St. Paul R'y)

Equipment and Service Unequaled.

Time tables, maps and information furnished on application to

F. A. MILLER, General Passenger Agent, Chicago, Ill.

ST. LOUIS, MISSOURI

Washington University

SCHOOL OF

ENGINEERING and ARCHITECTURE

Offers a four-year course in Architecture leading to a degree B. S. in Architecture

College graduates admitted to advanced standing or as special students

FREDERICK M. MANN, - - PROFESSOR

A handsome Enamel Finish obtained with slight labor cost

EGGSHEL-WHITE
(Trade-Mark)

Is an Enamel Paint unlike any ever before produced. It dries with an eggshell gloss, so that only the last coat needs a slight rubbing; none of the undercoats need rubbing, and thus the great labor expense necessary with all other Enamels is eliminated.

Eggshel-White gives a beautiful finish, is pure white in color, and has wonderful durability. The strongest spirits of ammonia may be poured upon it without affecting the finish.

An entirely new Enamel which it will pay you to investigate. Send for descriptive matter and sample panel.

Chicago Varnish Co.
Established 1865

Dearborn and Kinzie CHICAGO. | 22 Vesey St. NEW YORK | 66 High St. BOSTON

COLORADO

The way to get the best accommodations is via the

ROCK ISLAND SYSTEM

Why? It is the only direct line to Colorado Springs and Manitou.

It it the popular route to Denver. It has the best Dining Car Service.

It has the finest equipment and most satisfactory schedule and in the

Rocky Mountain Limited

offers the best train, only one night, Chicago to Colorado.

It leaves Chicago daily at 5:45 p. m. and arrives at Denver 8:45 p. m., Colorado Springs (Manitou) 8:30 p. m.

Another inducement to use the *Rock Island* will be the round-trip rates of **$25** Chicago to Colorado and **$15** Missouri River points to Colorado, effective this summer by that line. Ask for details and free books.

"Under the Turquoise Sky" gives the most fascinating description of Colorado.

"Camping in Colorado" has full details for campers.

JNO. SEBASTIAN, P. T. M., Chicago, Ill.

Folsom New Model Snow Guard

Specified by leading architects to hold the snow on all pitch roofs, entirely obviating all chance of injury to life or to the property it protects. The only perfect device for this purpose. It is made in various forms for old and new roofs of slate, shingle, tile or metal. Full information on application.

THREE HISTORIC BUILDINGS.
Faneuil Hall,
Old South Church,
King's Chapel,
Boston,
Are Fitted with this Snow Guard.

FOLSOM SNOW GUARD CO.
ROSLINDALE (BOSTON), MASS.

GRILLES
Original designs, beautifully carved to fit any space.
Also Carved and Embossed Mouldings, Capitals, Newel Post Tops, Rope and Twist Balusters.
Waddell Mfg. Co.
7 Plainfield Ave., Grand Rapids, Mich., U. S. A.
Illustrated General Catalogue No. 18. Over 1,000 designs. Mailed for ten cents in stamps.

THE NORTH-WESTERN LINE

$33 TO California

Oregon and Washington points from Chicago daily during September and October. Correspondingly low rates from other points. Three fast trains daily to San Francisco and two to Portland. Pullman standard and tourist sleeping cars, observation and dining cars, free reclining chair cars, through without change.

Round-trip tickets at low rates on specified dates during August, September and October to Pacific Coast and the west. Call on any ticket agent or write to representatives

The North-Western Line

for full particulars.

W. B. KNISKERN,
PASSENGER TRAFFIC MANAGER,
CHICAGO.

SITUATION WANTED.

A quiet young lady who has finished a technical course in mechanical drawing and is experienced in designing, would like to work in an architect's office in Chicago.

Address "A. B.,"
Office of Inland Architect.

SIDE VIEW.

FRONT VIEW.

RESIDENCE OF JOS. MILBANK, PORT CHESTER, N. Y.

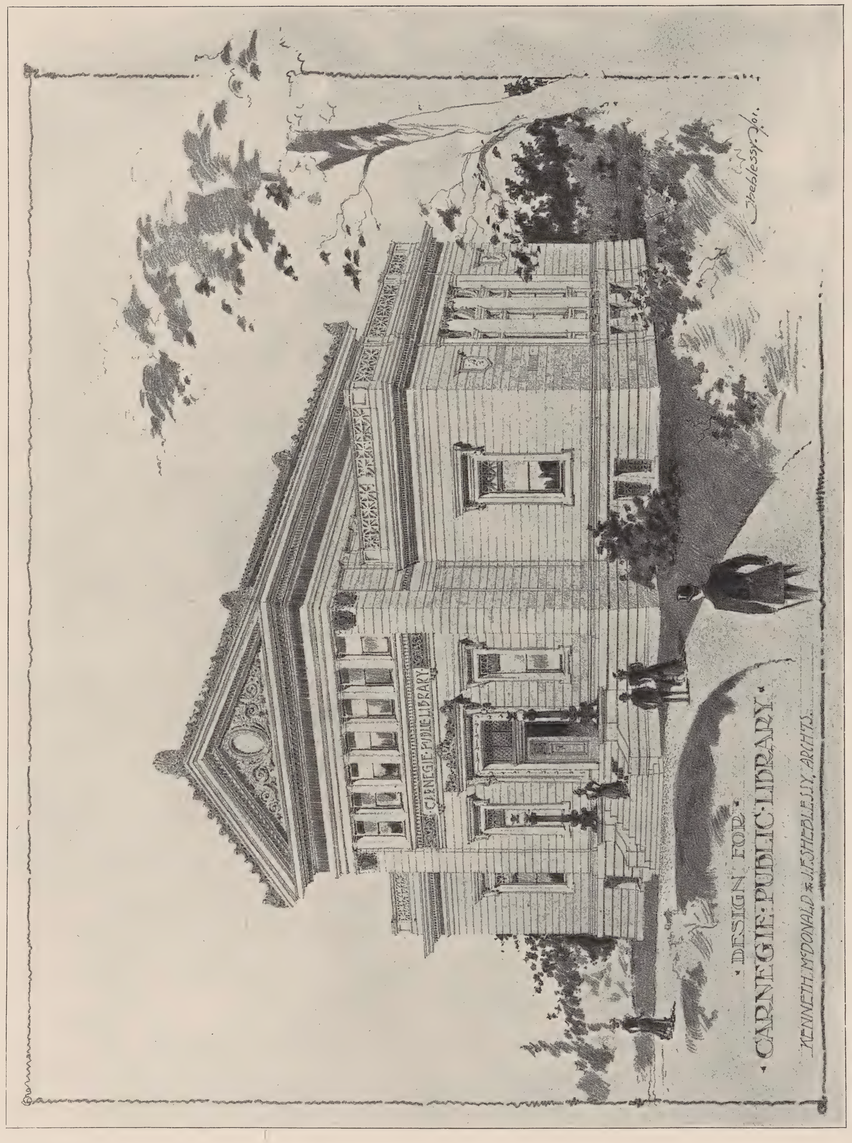
HOWARD, CAULDWELL & MORGAN, ARCHITECTS, NEW YORK CITY.

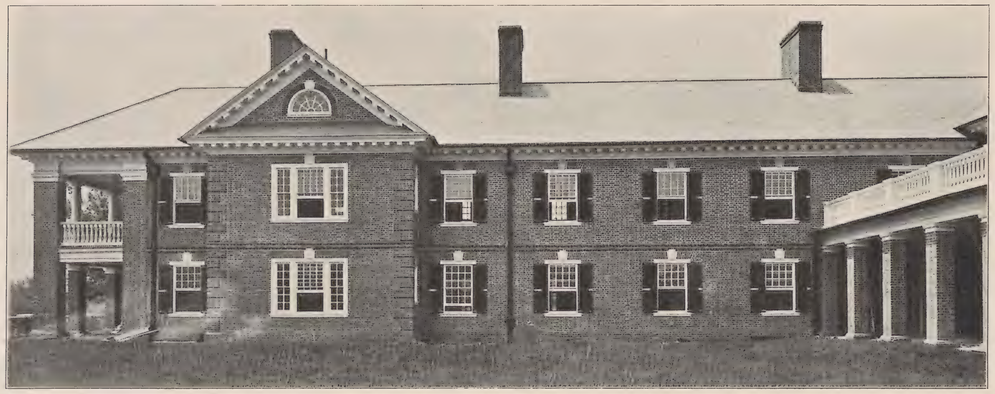
THE STABLE.

DETAIL OF HOUSE.

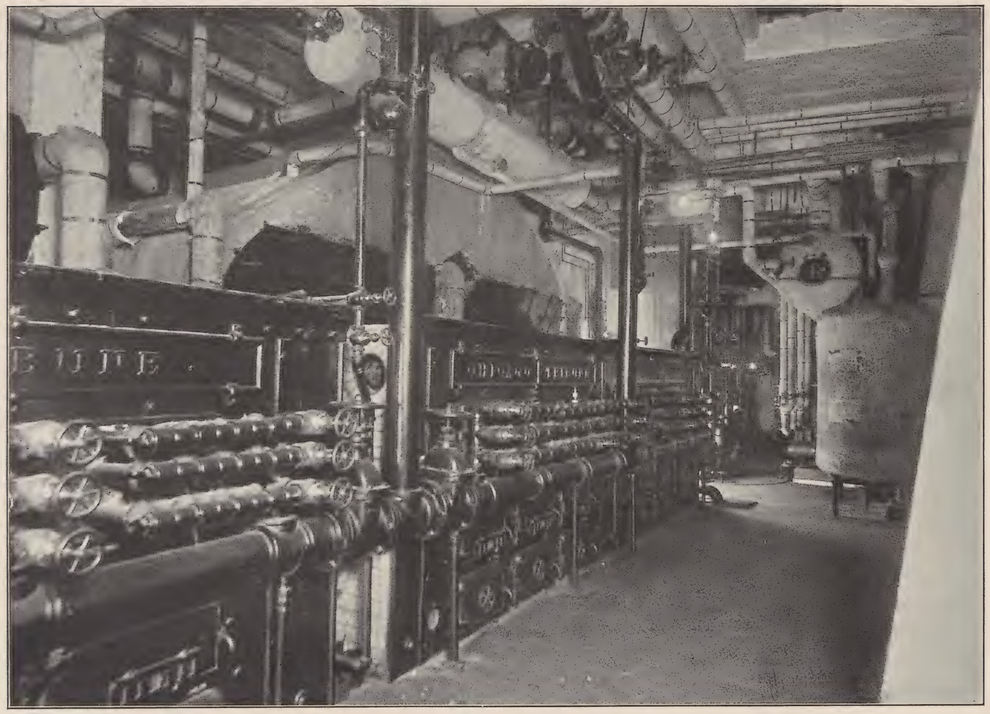
VIEWS, ESTATE OF ALLAN REED, WAYNE, PA.

W. L. PRICE, ARCHITECT, PHILADELPHIA, PA.

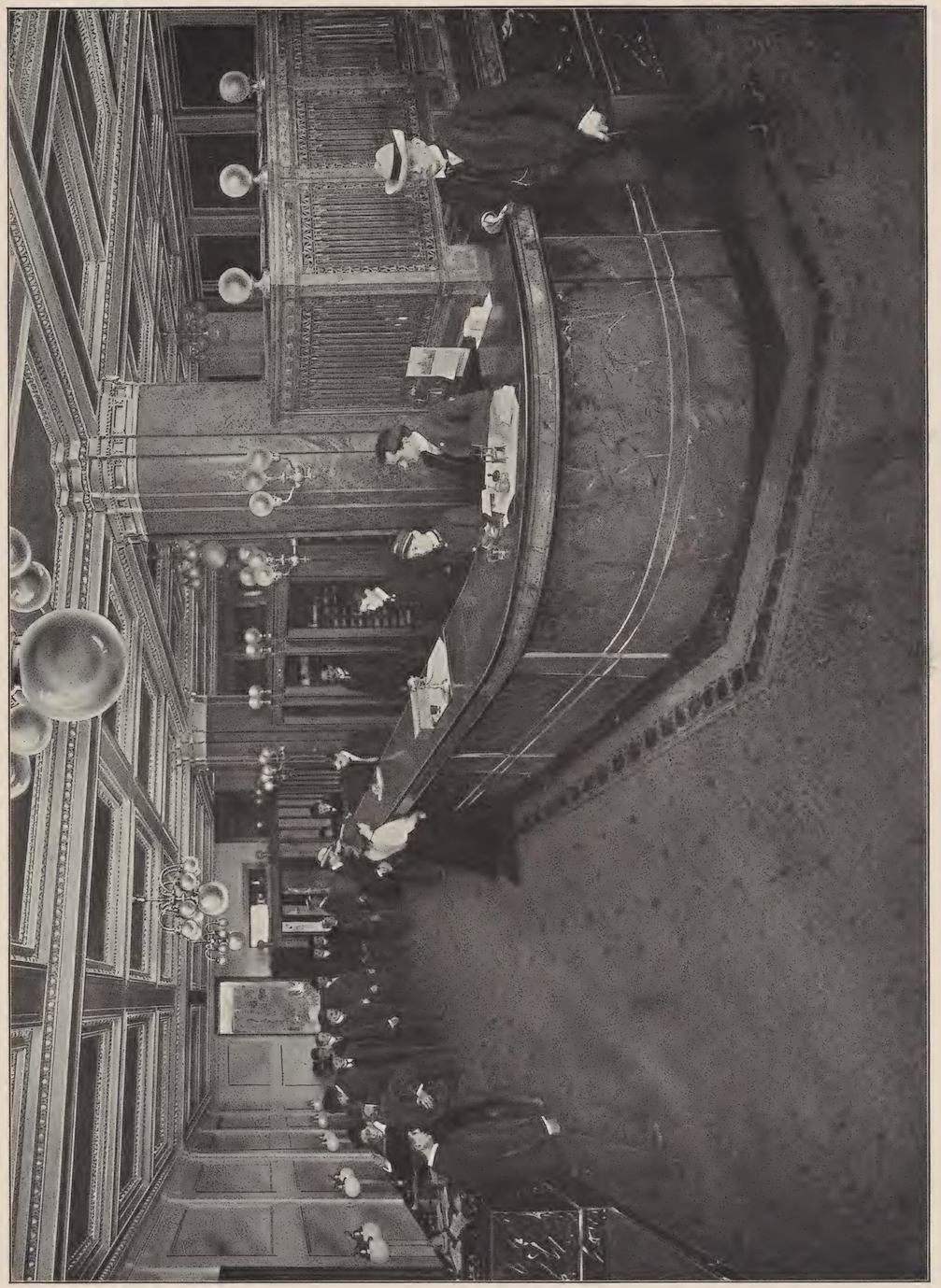




DETAIL VIEWS, LEAMY HOME, MT. AIRY, PENN.
COPE & STEWARDSON, ARCHITECTS.



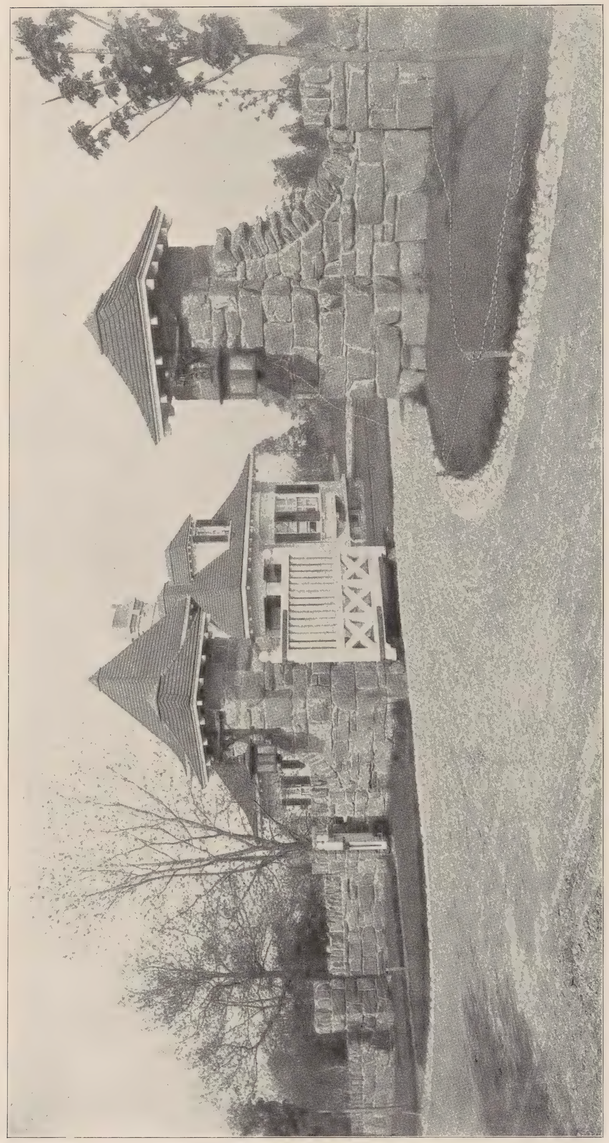
VIEW IN BOILER-ROOM, CHICAGO TRIBUNE BUILDING.



THE COUNTING-ROOM, CHICAGO TRIBUNE BUILDING, CHICAGO.
HOLABIRD & ROCHE, ARCHITECTS.

BATH-HOUSE.

THE STABLE.



GATE LODGE AND GATEWAY.

VIEWS, ESTATE OF JOS. MILBANK, PORT CHESTER, N. Y.

HOWARD, CAULDWELL & MORGAN, ARCHITECTS, NEW YORK CITY.

RESIDENCE OF JOHN PARKINSON, ARCHITECT, LOS ANGELES, CAL.

RESIDENCE AT DENVER, COLORADO.

THOMAS, DRYDEN & THOMAS, ARCHITECTS.

FINAL DESIGN, CHICAGO TRIBUNE BUILDING, CHICAGO.

HOLABIRD & ROCHE, ARCHITECTS.

INTERIOR VIEW, MAIN FLOOR CHICAGO TRIBUNE BUILDING.

HOLABIRD & ROCHE, ARCHITECTS.

Negative by R. W. Williams, Chicago.

INLAND ARCHITECT PRESS.

INSTITUTION FOR SAVINGS, ROXBURY, MASS.

PEABODY & STEARNS, ARCHITECTS.

Negative by R. W. Williams, Chicago.

INLAND ARCHITECT PRESS.

ROXBURY COURTHOUSE, MASS.

FRANCIS ALLEN & VANCE, ARCHITECTS.

Negative by R. W. Williams, Chicago.

INLAND ARCHITECT PRESS.

APARTMENT BUILDING, NEW YORK CITY.

HARDE & SHORT, ARCHITECTS.

Negative by R. W. Williams, Chicago.

INLAND ARCHITECT PRESS.

NEW RUNKLE SCHOOL, BROOKLINE, MASS.

PEABODY & STEARNS, ARCHITECTS.

Negative by R. W. Williams, Chicago. INLAND ARCHITECT PRESS.

CORNER VIEW, APARTMENT BUILDING, NEW YORK CITY.

HARDE & SHORT, ARCHITECTS.

Negative by R. W. Williams, Chicago.

INLAND ARCHITECT PRESS.

TECHNOLOGY CHAMBERS, BOSTON, MASS.

KILHAM & HOPKINS, ARCHITECTS.

Negative by R. W. Williams, Chicago.

INLAND ARCHITECT PRESS.

RESIDENCE OF CHAS. H. WHITEMAN, BROOKLINE, MASS.

SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS.

Negative by R. W. Williams, Chicago.

INLAND ARCHITECT PRESS.

RESIDENCE OF HENRY LOGAN, WAYNE, PA.

DAVID K. BOYD, ARCHITECT, PHILADELPHIA.

THE INLAND ARCHITECT AND NEWS RECORD

Vol. XL. ADVERTISERS' TRADE SUPPLEMENT. No. 2

PROTECTION OF STEELWORK.

A good painter and a good paint are needed to save steelwork from corrosion. The technical arguments on protective paint have been very exhaustive, but it remained for the Joseph Dixon Crucible Company, Jersey City, New Jersey, to bring out a series of illustrated mailing cards showing practical results obtained in the use of one of their noted products, Dixon's Silica-Graphite Paint. The durability records show that this paint protects steel bridges and viaducts from corrosion for five to fifteen years, iron and tin roofs from five to ten years and steel smokestacks from one to five years. The elegant souvenir mailing cards referred to will be sent to any reader of the INLAND ARCHITECT AND NEWS RECORD upon request to the Joseph Dixon Crucible Company, Jersey City, New Jersey.

A BOOK ABOUT CALIFORNIA.

IT IS EASY AND INEXPENSIVE TO GO THERE NOW THAT THE RAILROADS HAVE REDUCED THEIR TICKET FARES.

During the winter months, while those in most parts of the country are suffering from extreme cold and disagreeable weather, California, the land of sunshine, is radiant with fruits and flowers and everything that is green and beautiful.

Formerly a trip to California was an expensive luxury, but now that the railroads have very greatly reduced the price of tickets, and particularly since we have introduced the "Personally Conducted Excursion" idea, you can go to California in a comfortable through car by the choicest route and for a very moderate sum.

Is it worth while to fight through the winter at home when you can so easily go where the perfect climate will keep you strong and vigorous? The saving in doctor's bills likely will pay for a California trip. Send 6 cents in postage for our handsome little book about California. It is intensely interesting and is beautifully illustrated. Address P. S. Eustis, Passenger Traffic Manager, Chicago, Burlington & Quincy Railway Company, Chicago.

TRADE NOTES.

WESTINGHOUSE, CHURCH, KERR & CO. announce the removal of their New York office from the Havemeyer Building, 26 Cortlandt street, New York city, to the Maritime Building, Nos. 8 to 10 Bridge street, opposite new Custom House and near Bowling Green. The change is the result of a largely increased business. Three floors, the first, second and third, will be devoted to the use of the firm. The new quarters will afford about double the floor space available in their present location. The future official address will be Westinghouse, Church, Kerr & Co., 8-10 Bridge street, New York city.

THIS for the New York Central's Twentieth Century Limited" is a moonlight courting of the muse:

Mounting space at a wonderful rate,
Connecting the ends of the Empire State,
Rushing through forest and rolling through vale,
Climbing the hills and skirting the dale;
With a wing as fleet as the god of light,
Two lines of steel to guide its flight,
A grizzled man at the lever stood,
Promising himself that he'd "make good";
While behind him rolled in palatial style
Coaches filled with the rank and file,—
Men of finance, of letters and rail,
Ready to cheer with joyous hail
The greatest train that ever was run,
From the rising to the setting sun.
And thus it was with the "T. C. T.,"
The swiftest of all on the N. Y. C.

—J. E. B. in the Buffalo Commercial.

"GOOD stock needs good lighting" is a truth realized this season as never before by the leading merchants throughout the country, as evidenced by their orders for reflectors to the well-known house of I. P. Frink, 551 Pearl street, New York. Among the many contracts for Frink's Special Patent Window Reflector and showcase lighting in hand or recently filled, we are advised of the following: Gimbel Bros., Philadelphia; also their Milwaukee store; Bloomingdale Bros., New York city; Siegel-Cooper Company, New York city; the handsome new buildings of Saks & Co., and R. H. Macy & Co., New York city—two stores which because of their location have attracted general attention; Washington Arcade, Detroit; Kennedy Furniture Company, Butte, Mont.; Derby Desk Company, Boston; L. Hammill & Co., Mobile, Alabama, who are conceded to have one of the finest store buildings in the South; J. N. Mockett, Toledo, Ohio; Hannifin Dry Goods Company, Milwaukee, and "The Leader," Minneapolis, Minn.

WANTED

A thoroughly competent superintendent for large buildings. Good executive ability and complete, practical knowledge of the building business in all its branches essential. Good salary for the proper party.

W. H. ELLIS & CO.

General Contractors

Mitchell Building Cincinnati, Ohio

JUST THE OTHER DAY

"The Greatest Testimonial Ever Given"

CAME TO THE

APOLLO *Master Piano Player*

HERE IT IS:

Clark Apollo Co., London, Eng. *Craig-y-nos, Breconshire, May 31, 1902.*

Dear Sirs,—The "Apollo" Piano Player I have purchased from you is marvelous. I can not find words to express my admiration for this most wonderful invention.

I have seen others, but yours is the one I consider perfect, both for piano and voice. The transposing device is most ingenious, and I congratulate you on this greatest of all musical inventions. *ADELINA PATTI, Baroness Cederstrom.*

FROM

Adelina Patti

Jenny Lind's only rival as the greatest soprano that ever lived.

WHY DOES SHE LIKE THE APOLLO BEST?

ONLY THE APOLLO

(**1st**) *The entire 82 notes* of a piano are used, *17 more than others* (or even 88).
(**2d**) Can *instantly change the key* to suit voice or instrument.
(**3d**) *Stores* the power and delivers free from pumping pulsations.
(**4th**) Allows fast pumping for fortissimo passages *without* deranging the tempo. It has **12** other points of superiority as *vital.* We'll tell you of them in a *pamphlet* . . *Sent with pleasure.*

MELVILLE CLARK PIANO CO.

Manufacturers, Wholesale and Retail

399, 401, 403 & 405 W. Madison St., Dept. A, CHICAGO

Downtown Warerooms, 267 Wabash Av. **Tel. Monroe 984**

YOU ABSOLUTELY CONTROL
the ***expression*** (time and tone-volume)
when you play the piano with
THE APOLLO

Summer residence of Chauncy Keep, Esq.,
at Camden, Me.
Frost & Granger, Architects, Chicago.

Cabot's Shingle Stains

The Original and Standard, and only "Creosote" (trade-mark) Stains.

Distinguished by their soft, fresh coloring effects and durability. Furnished in any color desired. Use any color you want in working up your color scheme, and if we have none like it we will make one without extra cost. Samples can always be had on application.

SAMUEL CABOT, Sole Manufacturer,

28 Dearborn Ave., CHICAGO, ILL. **70 Kilby St., BOSTON, MASS.**

The Roebling System of Fire-Proof Construction.

HIGHEST EFFICIENCY IN THE FIRE AND WATER TESTS OF THE NEW YORK BUILDING DEPARTMENT, AND NOW THE RECOGNIZED STANDARD OF FIRE-PROOF CONSTRUCTION.

THE ROEBLING CONSTRUCTION CO.,

121 Liberty Street, NEW YORK CITY. *171 Lake Street, CHICAGO, ILL.*

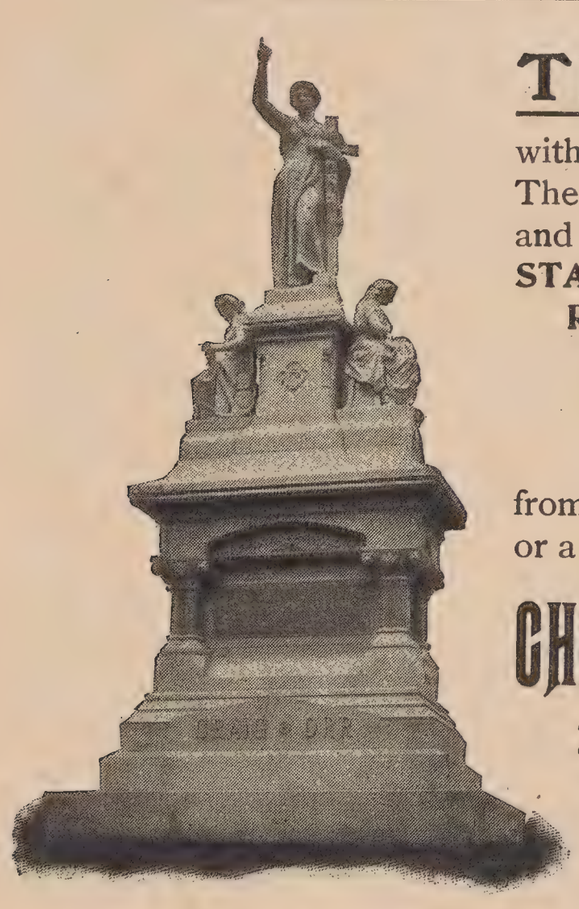
SEND FOR CATALOGUE.

DRAWING INSTRUMENTS

A. H. ABBOTT & CO.

Drawing Supplies,

Instruments, Tracing Cloth, Papers, Colors
Scales, Levels, Transits, Etc.
BLUE PRINTS.
50 Madison Street, CHICAGO.



THIS IS one of our monuments with statuary. Stands 26 feet high. The statues represent **Faith, Hope** and **Charity**, and are made of **STATUARY GRANITE.**

REMEMBER, that we work

ANYTHING IN GRANITE

from a door sill to a fine statue or a mausoleum.

CHAS. G. BLAKE & CO.

748 Woman's Temple
CHICAGO, ILL.

Tel. 115 Main

MAGNESIA

Steam Pipe Coverings

HEAVY DAMAGES

TO BE COLLECTED AGAINST ALL INFRINGERS

IN THE SUITS against the
Philip Carey Manufacturing Company
American Magnesia Company
American Magnesia Covering Company
Schoellkopf, Hartford & Hanna Co.

The Court has required the defendants to make answer to our bill.

THEIR DEMURRER OVERRULED

Suit has been entered against the C. W. Trainer Manufacturing Co., of Boston.

All persons are warned not to engage in any piracy of our patents, as suits will promptly follow against all Infringers.

Keasbey & Mattison Company

AMBLER, PENN.

Please mention THE INLAND ARCHITECT when corresponding with Advertisers.

THE INLAND ARCHITECT AND NEWS RECORD

Vol. XL. SEPTEMBER, 1902. No. 2

A Monthly Journal Devoted to

ARCHITECTURE,

CONSTRUCTION, DECORATION AND FURNISHING

IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,
609-610 MANHATTAN BUILDING, CHICAGO, ILL.

L. MULLER, Jr., Manager. ROBERT CRAIK McLEAN, Editor.

SPECIAL CONTRIBUTORS:

C. HOWARD WALKER. D. H. BURNHAM, W. L. B. JENNEY,
HENRY VAN BRUNT, P. B. WIGHT, IRVING K. POND,
LOUIS H. SULLIVAN, ALLEN B. POND, J. R. WILLETT,
WILLIAM S. MACHARG. C. E. ILLSLEY. F. W. FITZPATRICK.

TERMS: Regular number, $5 a year; Photogravure edition, $10 a year. Single copies, Regular number, 50c.; Photogravure edition (including 7 photogravures), $1. Advance payment required.

The columns and illustration pages of THE INLAND ARCHITECT are open to all alike, merit and availability only determining what shall be published. Contributions appropriate to its pages are always desired.

AMERICAN INSTITUTE OF ARCHITECTS.

OFFICERS FOR 1900:

PRESIDENT	*CHARLES F. McKIM, New York, N. Y.
SECRETARY AND TREASURER	*GLENN BROWN, Washington, D. C.
FIRST VICE-PRESIDENT	FRANK MILES DAY, Philadelphia, Pa.
SECOND VICE-PRESIDENT	ALFRED STONE, Providence, R. I.
AUDITOR FOR TWO YEARS	W. G. PRESTON, Boston, Mass.
AUDITOR FOR ONE YEAR	S. A. TREAT, Chicago, Ill.

BOARD OF DIRECTORS:

For three years.—Walter Cook, New York, N. Y.; William S. Eames, St. Louis, Mo.; Cass Gilbert, St. Paul, Minn.

For two years.—J. M. Carrère, New York city; James W. McLaughlin, Cincinnati, Ohio; R. Clipson Sturgis, Boston, Mass.

For one year.—Henry Van Brunt, Kansas City, Mo.; James B. Hill, Washington, D. C.; Normand S. Patton, Chicago, Ill.

*Executive Committee.

STANDING COMMITTEES FOR 1900:

Judiciary Committee.—Wm. S. Eames, St. Louis, Mo.; James G. Hill, Washington, D. C.; Arthur G. Everett, Boston, Mass.

House and Library Committee.—Robert Stead, Washington, D. C.; Glenn Brown, Washington, D. C.; Frank Miles Day, Philadelphia, Pa.

Committee on Contracts and Lien Laws.—Alfred Stone, Providence, R. I.; W. B. Mundie, Chicago, Ill.; Arthur G. Everett, Boston, Mass.

Committee on Applied Arts and Sciences.—W. G. Preston, Boston, Mass.; F. E. Kidder, Denver, Colo.; Frederick Baumann, Chicago, Ill.

Committee on Foreign Correspondence.—Glenn Brown, Washington, D. C.; J. G. Howard, New York city; R. W. Gibson, New York city.

Legislative Committee on Government Architecture.—George B. Post, chairman. Committee—Bruce Price, New York city; John M. Carrère, New York city; James G. Hill, Washington; Alfred Stone, Providence. Alternates—Edward H. Kendall, New York city; E. B. Green, Buffalo, N. Y.; D. H. Burnham, Chicago, Ill.; Robert Stead, Washington.

NEXT CONVENTION AT WASHINGTON, D. C.

THE ARCHITECTURAL LEAGUE OF AMERICA.

OFFICERS FOR 1901-1902.

PRESIDENT	FREDERICK S. LAMB, New York.
VICE-PRESIDENT	C. H. BLACKALL, Boston, Mass.
TREASURER	JULIUS F. HARDER, New York.
CORRESPONDING SECRETARY	H. K. BUSH-BROWN, New York.
RECORDING SECRETARY	W. E. STONE, New York.
ADDITIONAL MEMBERS EXECUTIVE BOARD	F. CROWNINSHIELD, New York. D. K. BOYD, Philadelphia.

NEXT CONVENTION AT ST. LOUIS, MO., OCTOBER 12-13, 1903.

Social Feature of the Institute Conventions.

The exact date of the annual convention of the American Institute of Architects has not been announced, but it will be held in Washington, and it was proposed that it should convene early in the month of October. It is hoped that this will not be changed, as it is as convenient a time as any for architects to get away from their work, and it is the ideal time to visit Washington. To the Western architect going by way of Cincinnati the whole range of mountain and valley are in their autumn robes, and the Capital city itself is in holiday attire. It is not out of place to view the annual convention as a vacation and a social gathering, for while the serious work of the convention is necessary, and doing much year by year to advance architecture in ethics and practice, it is the meeting of the profession's representatives under the most favorable social conditions that maintains the standing and gives it impetus throughout the country.

The Prompt Rebuilding of the Campanile.

The rebuilding of the Campanile, probably largely through the prompt financial assistance received from the United States, will be undertaken at once. Soldiers are employed in separating the debris, and it was found that, fortunately, much of the marble remains but slightly injured. The statue of Mercury has an arm broken and fingers of one hand, but is otherwise intact. On the system of "locking the barn" the architects in charge of the Campanile and other Venetian monumental buildings have been deposed, and Architect Boni given full charge, not only of the reconstruction of St. Marks, but the Royal Palace and other buildings. While it is the sentiment of age and epoch as much as artistic beauty which has endeared the Campanile to the artists of the world, it speaks well for the future of art that in this commercial age its destruction is regretted, and the greatest endeavor made to restore its beauty.

Successful Lectures to Masons' Apprentices.

The success which attended the lectures given by architects of the Illinois Chapter of the American Institute before the masons' apprentices in Chicago last winter was so signal that they will be repeated the coming season. It is not generally known that the master masons and the masons' union have arranged an apprentice system under which each apprentice receives three months' schooling each year, during which time he is obliged to attend school and also receives his pay from his employer. The city of Chicago has also arranged schoolrooms and teachers for their special use, and their studies not only comprise elementary branches, but follow such technical lines as will best serve them in their work. It is encouraging to note that of the apprentices who attended school last winter not one seemed indifferent, and many attended the night as well as the day classes, and all were enthusiastic and diligent. This has all been accomplished by the unselfish work of a few men, who wish to aid in the elevation of the workman and the improvement of his work, and shows what can be accomplished in every trade, and how gladly accepted such aid is by the young mechanic who wishes to succeed in mastering his trade.

THE SELECTION OF BUILDING SITES.

BY THOMAS HAWKES, LANDSCAPE ARCHITECT, CHICAGO.

THE determination of the site for a building is one that demands careful consideration, and those who do not sufficiently appreciate its importance are those who are inexperienced in such matters.

The landscape architect is frequently called upon to embellish and adorn with his "art" the grounds around a building that has been erected in a wrong position, but nothing that he can do can remedy the initial mistake. Plantings and expensive earthworks and decorations can *help* the effect, but the opportunity to create a perfect and harmonious whole has passed.

Study and experience enables one to solve most problems, but he who decides on such an important matter as this, with only his intuition and common sense to guide him, generally pays dearly for his temerity.

There are many things to be taken into consideration in the selection of the site, apart from opinions and matters of taste.

Buildings that are erected in grounds calling for landscape treatment are of a costly nature, and are built in such a substantial manner that any mistake made in selecting the site for them is an error perpetuated to succeeding generations. These mistakes unfortunately abound. Many fine buildings are spoiled by being placed in a wrong position.

The buildings themselves are, of course, the first consideration, and the landscape effect must be subordinate to them, but the position of them, and their relation to each other and to the arrangement of the land is the factor which determines the perfection of the whole.

The aspect of the principal front is generally considered to be of the greatest importance, and most people select the highest ground for their building so that it may "show up" well. This is considered an advantage. The finest views from the windows are desired, without the consideration that after a while these beauties begin to pall.

It is true that the various views from the principal rooms must be carefully studied, but too much stress must not be laid on the prospects from the house. There are more important matters to be taken into consideration than fine views from the windows.

The position of the building with regard to the compass, the convenience in regard to the approaches and to the other buildings, the necessary natural shelter and the connection with the garden and the grounds are of greater importance than any consideration of views, display or grandeur. The shape of the building will necessarily regulate its position with regard to the sunshine, shade and shelter, and these requirements vary in different parts of the country.

It is nearly always a mistake to put the building on the highest point. It is better to place it at such an elevation that the higher ground will afford a shelter from the prevailing winds. There are always parts of a building that it is not desirable to expose to view, and by this arrangement they can be conveniently disposed of.

A building situate on a hillside, with trees in the background and with terraces and gently sloping lawns, has a charming and harmonious effect, and beautiful views can be obtained from there of the surrounding scenery and the landscape to be created. This prospect may not be as extensive as the one to be obtained from the eminence, but it must be always remembered that that can be gained, and an opportunity can thereby be afforded for making skillful approaches to it that will reveal many new and unexpected views. This process multiplies the charms.

When the land is flat, the building should be raised sufficiently so that the approaches will slope gently toward it. Should it also be bare of trees it is an undesirable site, but if it is necessary to build on it, there should be plenty of trees planted, as they form a better windbreak than walls and serve to hide the boundaries of the grounds.

The determination of the site of a building must also be considered in relation to the stables and outbuildings and the kitchen garden, which should be conveniently near and not obtrusive, but as objects of interest they should form a combination to make a complete whole.

This will result in carefully considered work.

The building is to an extent subordinate to and dependent on the landscape effects and these in turn are heightened or marred by the building, which is either restful to or distressful to the eye.

It is often the case that by wisely selecting the site of the building advantage can be taken of the natural conformation of the ground, and results can be achieved that would cost considerable expense to obtain in other ways.

To design a building appropriate to its site, one that by its shape will fit into its surroundings, is a task that requires careful consideration on the part of the architect. Unfortunately, this sideration is not generally given, and the result is disastrous, even though the buildings themselves may be excellent in design.

A landscape painter, if called upon to remedy the "something that is lacking" in the picture, can never make effective the poorly constructed work of another artist, even if the details are beautiful. He can only modify the defect of conception by trying to make it a unity.

The good landscape painter understands composition and harmony and breadth of treatment, and the effects of light and shade. He understands the mutual relation that exists between land and water, trees and bushes. He knows that nature abhors a straight line, and he studies from her. He loves to paint grand, gnarled and knotted trees and wild growths of bushes, with glades and rugged banks and rocks, and water with sedgy margins. He selects some lowly or ancient or dilapidated building to fit in and harmonize with such surroundings, and the perfection is at once apparent. In many notable landscapes the artist has portrayed noble mansions with stately surroundings, but he has always added to it the charm of nature's wildness. It is, however, in the realms of imagination that he has most excited our admiration. Untrammeled by conventionality, he has produced a dream of shape and color, with earth and sky and cloud, with water and foliage in complete harmony and unity with the building of his fancy. Would that the skill of the landscape painter might be interwoven with the more utilitarian qualities of the landscape architect!

The artist's pictures, however, are always from *one* point of view; the landscape architect must consider his from *many* perspective points, and giving thought to how mother nature would have done the work, he must round her off with art, and by a happy compromise between picturesqueness and formality, let order and precision rule near the building.

The selection of a building site depends greatly upon the trees growing there. They are beautiful and complete in themselves and greatly enhance the appearance of the building, but that must not be sacrificed for them; they are the attendants.

The successful results that have been attained have not come from chance, but from skill, and when the importance of the subject is more universally recognized, and when landscape gardening is generally considered by the architectural profession to be more than a mere decorative art, the selection of building sites will receive more careful attention.

Chicago, September, 1902.

OUR WASHINGTON LETTER.

BY F. W. FITZPATRICK.

THE INLAND ARCHITECT asks me for news from Washington. A criticism of what is going on, a "heart to heart" talk upon matters architectural. It is an ill-timed request; the thermometer is near the hundred mark, and I have just lost in a series of tennis games, yet am I expected to be pleasant, to deal in kindly criticism, and to see only the bright side of things.

There *are* a lot of new buildings; in fact, there has been an unprecedented amount of building done, but it has no interest architecturally. In the first place it is not local architecture, for it is not the fashion to employ local architects; then, for some unaccountable reason, when even a first-class "outsider" designs a building here he slurs it, or neglects it, or does something to it, for it certainly is a fact, a lamentable one, that no city in the country can make so poor a showing architecturally for the amount of money expended and the alleged talent drawn upon, as can this same dear old Washington.

The fact that the local people, the old-timers, are not generally those who spend money here in buildings, partially explains the lack of patronage bestowed upon local talent. A man comes here to live, a Congressman, or some one just retired from commerce, and whose wife has social ambitions, and he naturally employs some one he knew in his home city, or else he learns that it is fashionable to go to New York to buy one's gowns and hats and poodles and carriages, and to *hire* one's chef and one's architect, so to New York he goes too.

That is explicable, reasonable; but why on earth a real good architect, with plenty of clever things to his credit, should plant down the poorest effort of his intellect in the city of all others that merits the best to be had, is something that is far beyond my feeble powers of explanation.

There are apartment houses galore, rising, it would seem, at every second corner, generally hideous, always pretentious, coarsely detailed and gaudy. Comfortable, I believe, at least people tell me they are, fairly well built and liable to remain eyesores for a generation. Fortunately the law limits them to about nine stories, otherwise they would be carried up to "foul obtrusiveness," as was the "Cairo" (built before the law was passed), undoubtedly the most conspicuously ugly building on the continent.

They are pushing an office building at the corner of F and Fifteenth streets, from plans by M. de Sibour, of New York. A nine-story affair that is quite good in its lower stories, but a fizzle at the top. The gentleman who designed it was either afraid of the foreshortening effects of height and exaggerated his cornice, or else he got the details made for a twenty-story building cornice mixed in with the plans of this one; at any rate the top of that building makes me think of the cartoons they used to get off upon poor President Harrison, showing a tiny boy, a four-year-old, weighted down with the enormous beaver of his grandad, literally snuffed out of sight by his headgear.

Preparations are being made to extend the new Willard hotel so as to cover a full half block. It will be an imposing building by its size, one of the regular Hardenburg designs (New York), nothing particularly attractive about it, but so well managed that it will not provoke adverse criticism. Its purpose is evident and its architecture not offensive.

The same may be said of the Woodward & Lothrop department store. It covers a half block and will ultimately cover a whole block, a good fair building, by Mr. Cobb, essentially a store building, one that will neither impel you to stop and admire nor make you grind your teeth and call upon Allah to confound the unholy.

The Bond building, at the corner of Fourteenth street and New York avenue, has been finished since my last letter. It is a very good building above the ground floor, but that first story is certainly the most unrestful, contorted, tormented thing I have ever seen. Its architect, seemingly, has taken a delight in introducing there every kind of arch, square opening and other feature he ever knew or heard of.

A big building is being started on the site of the old Foundry Church for Millionaire Walsh of Colorado. I think it is by Mr. Townsend, of New York. So far I have only seen a very fine water-color of a very pretentiously ornate, ordinary design for it. Time may improve it.

This same millionaire is building a very large mansion on Massachusetts avenue, from designs by a Mr. Henderson, also of New York. A great, big, restless thing. A series of rounded corners, making one think of the Bastile. There is nothing refined about it, and the coarseness of its parts dwarfs, yet — paradoxical as it seems — makes it clumsier still. A striking contrast to the Frenchy refinement of the façade directly across from it, by Carrère & Hastings.

Then there is the Patterson residence, commandingly situated upon Dupont Circle, one of the sightliest places in town. I think McKim, Mead & White, New York, were not at their best in this. It challenges attention, white marble and white terra-cotta, against all that surrounding green; one is forced to look at it and study it, and the inspection is not satisfying. It is glary, awkward in shape and bald. Perhaps when it is well covered with ivy it will be more satisfying.

There are houses sprouting up all about, mostly restless, tortured things, conceived in sin and brought forth in agony, abounding in *original* effects and strenuously vieing with one another for the honor of being the ugliest house in a beautiful city of ugly houses.

Once in a while you see something that makes you think of an oasis in the desert, a pretty, modest, refined piece of work, restful as it is pleasing. Among these is a house for Dr. Murray, by Mr. Ames, of Boston, and the Geographical Society's headquarters, by Hornblower & Marshall, local.

Notable additions and changes are being made to the White House. McKim, Mead & White, New York, are the architects. These gentlemen are proverbially conservative. Some, in fact, carp at them for taking some *motif* from semi-antiquity and adapting it plumb bodily to their modern needs, as they did in their Boston Library and the New York *Herald* building; yet that very conservatism has gone far toward preserving one of the few relics or monuments the nation possesses. For years engineer officers, ambitious dames, artists (?) seeking national notoriety, and others, have itched to get their fingers upon the White House, to add great wings to it, to bastinado and rack it, to draw and quarter it, and we plain old fogies have been living in fear that they might succeed, for their influence was mighty. A considerable sum is to be spent on that building, but by a happy combination of sensible President, sensible Committee on Buildings and sensible architect the exterior is to be left intact, unchanged. They are making it comparatively fireproof, modern in its appointments and inhabitable; they are restoring its pristine scheme of decorations and design, removing the legacies of various administrations in the shape of outlandish furniture, stained glass and what not, and adding many rooms, chiefly below ground, and approaches and porticos at the basement level for carriage entrances, and all that sort of thing, that experience has demonstrated to be necessary for the Executive Mansion; but the good old White House itself, in its essential lines, its character, its very faults, will remain as it was and as it should ever be, undesecrated. Thanks, Mr. McKim, ten times thanks!

The Public Library is nearing completion; it is a very white, very ornate, "classical" effort, unmistakably juvenile and riotous in its handling, and ill-placed upon a very easy-to-handle lot, but it will pass muster, and the highly intellectual will roll its eyes and smack its lips and declare, in strident tones, that it is "simply just too sweet."

LANDSCAPE ARCHITECTURE.*

BY GEORGE F. PENTECOST.

HERE there is the added problem of the grounds. When it is a matter of large tracts of land, such as Central Park, it is no longer a question as to who shall design it. It falls naturally to the landscape architect. In designing such tracts of land, the position and sites for public buildings, statuary and other objects of allied arts are determined and regulated by the general design. It could not well be otherwise, and it is obvious that the position here indicated applies of necessity to much smaller tracts of ground. Therefore, the logical answer to the question seems to be solved thus: the landscape architect shall decide upon the design for the whole property. For example, the units of treatment, both in large and small private grounds, are generally the sites for the house, stable and outhouses, and sometimes for the sculptural work; the kitchen and flower gardens, the drives and walks and the regulations for the grades and levels of the buildings, the planting and drainage systems and such architectural features as summerhouses, pergolas and terraces. It is the business of the landscape architect to determine upon these questions and to so regulate and adjust them that the whole will form a harmonious design. Apart from this, the architect, the artist and the sculptor are supreme in their respective departments. There is still, however, one side of the problem which can only be solved by the mutual coöperation of the architect and the landscape architect, and that is the character of the design for the house and grounds. It is not enough that the relative positions should be properly adjusted; the design for the house and the design for the grounds must harmonize by being based upon the same style or idea. It has been suggested that this difficulty, which is the cause of the criticism most frequently deserved when the house and the grounds have been designed by separate persons, will be solved by the specialist who shall combine the qualities of the architect and the landscape architect. But this will not be the solution, for two reasons: First, that the difficulty is more apparent than real and can only arise under unfavorable conditions, as when one or both of the designers refuse to harmonize by compromising upon small points or neglect to discuss the problem before settling upon the entire scheme; and second, it is directly diverse to the principle of specialization, which is inevitable and which has been the direct cause of the creation of specialists in this as in every other branch of work. The true solution of the problem rests with the progress and recognition of landscape architecture as a profession. The difficulties with which it has had to cope during its evolution are not a few. In the first place, it lacks that constant stimulus and pressure which bear upon a profession based primarily on utility or necessity. Architecture is such a profession; poor or rich, a country must have its houses, both private and public, and consequently the first fruits of prosperity are drawn upon to clothe this utilitarian necessity in the garb of beauty. Therefore, the architects of a country are constantly under this high pressure which produces a high state of perfection. There is practically no fluctuation in the demand

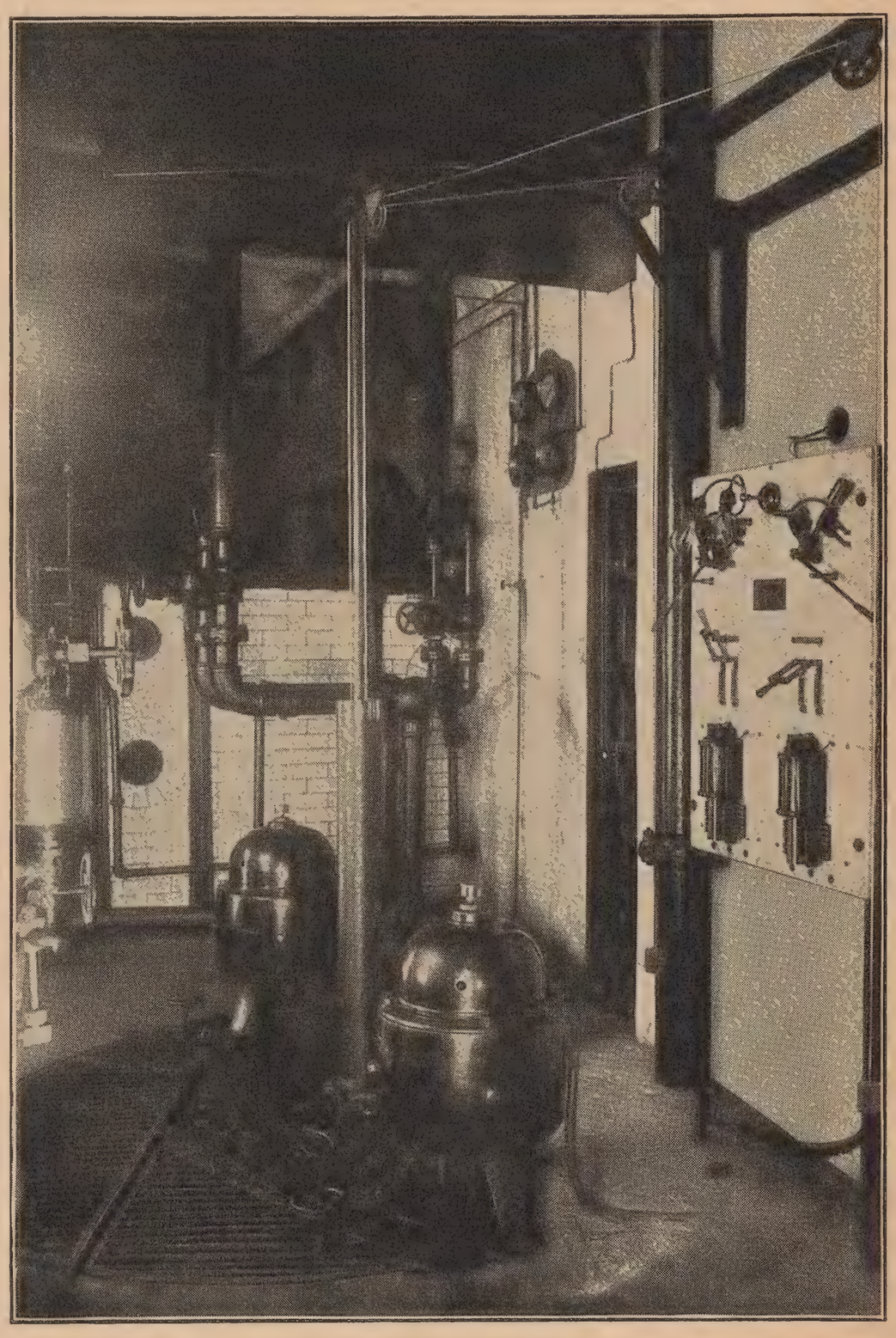
* Continued from Vol. XXXIX, No. 5, page 39.

for their services, and there is a constant demand for recruits who must be thoroughly trained in order to compete successfully. On the other hand, landscape architecture is based upon the esthetic requirements of a class, and that a limited one; it is thus dependent upon the second or third fruits of prosperity and is, therefore, seldom under high pressure. Its history is marked by a constant fluctuation, varying from positive extinction to comparative popularity. The result is that at the height of its prosperity some one or two capable men appear who do nearly all the work of importance, while a multitude of small practitioners, entirely without qualifications, spring into a mushroom existence and manage to make a living upon the crumbs that fall from the rich man's table. Never has the demand been sufficiently great or of sufficiently long duration to require and to support a thoroughly trained class of men; hence the heterogeneity of its practitioners. There are so many fields with which it is closely allied and with which it is, or rather has been identified, that its actual nature is obscured, and for this reason it has, until recently, lacked a clear-cut and dignified position. However, the time comes in the history of every art or craft, business or profession, when its growth, heretofore heterogeneous, becomes homogeneous. Its form gradually becomes crystallized, and its position in social or artistic circles becomes fixed. Such a time has now come to landscape architecture. Its power for good or evil is recognized; it has become in name, as well as in fact, a profession of good standing; it is recognized by individual property owners, by city, State and national government; it is recognized by the allied crafts and arts, and it has become conscious of the need of self-protection. That this is so needs but the recital of a few facts. About four years ago the Royal Institute of Architects in England elected Henry E. Milner, landscape architect, as honorary member of its society. This was, I believe, the first step taken by any of the allied arts to formally recognize the profession as such. In this country, Harvard University and Cornell and Columbia Colleges have lately introduced courses for supplying the profession with scientifically trained men. There is scarcely a city of importance, especially in this country, which has not only its system of parks, but its official landscape architect. The fact that the United States Government recently employed several landscape architects in conjunction with architects to beautify the capital of our country speaks for itself. Again, it is the exception, rather than the rule, for private or corporate property owners to develop their land without the advice and supervision of a landscape architect. Still again, the fact that the body of architects represented by this meeting considers the subject of sufficient importance to have it represented is convincing proof that it is a subject of growing interest, and finally, within the last few years there has been formed the American Society of Landscape Architects. This will tend to clarify and uphold the art upon a purely professional basis. The formation of this society is an excellent thing; it will tend to consolidate and unify the interests of landscape architecture. It will make the profession tangible, while at the same time it will create a standard of proficiency and compel the necessary amount of specific training for its members. But in itself it is not enough. Landscape architecture is so much a part of, or at least so closely allied with, architecture that whatever advances the interest of either must advance the interest of both. Until, therefore, there is not only a theoretical acceptance of this fact, but an active coöperation between the two arts, harmonious progression will be impossible. That this mutually beneficial progression is advisable is beyond dispute; that it does not exist few will care to dispute. A spirit of antagonism has existed between the representatives of the two arts since the inception of landscape architecture, or what is the same thing, its separation from architecture as a distinct profession. What progress landscape architecture has made during the last two hundred years has been made in the face of considerable opposition. That this opposition has been more or less justified is undoubted. The time has come, however, when the opposition ceases to be justified, and it is distinctly harmful to both professions. This fact is being recognized to-day and gives sufficient reason why landscape architecture is so live a subject among the architects. The fact of the matter is this: Landscape architecture has become a force in the artistic progress of modern life which can not be ignored. And the question which arises is, inasmuch as the two professions are so closely allied, in fact, so inseparably involved, inasmuch as they, taken together or separately, are practically responsible for the beautifying of both country and city life, is it not better that all animosities or rivalry between the two should be buried and replaced by a broad-minded endeavor to consolidate and harmonize the two interests? I need not apologize for speaking so frankly upon this point at this meeting, for presumably it is in the hope of consolidating the two allied arts that you have invited me here. I am the more anxious to speak upon this point for two reasons. First, because I recognize the fact that without the coöperation of the architects of the country, landscape architecture will lose the friendly aid of the most influential and dominating class of artists, not only of this country, but of all countries, for architecture is the life of all the arts, and without it all arts would cease. And second, because I recognize that the particular department of landscape architecture which elicits the interest of the architects is that class of work which landscape architecture has always slighted. I refer to the formal or architectural gardens. It is my personal hope that the present revival of the formal garden will be a permanent feature in all future landscape architectural work. There is but one style of garden, namely the formal garden, and no garden is perfect without its architectural setting. And so, while I bespeak the influence of the architects of the country to advance the general interest of landscape architecture, I exceedingly rejoice in the fact that a side issue of that influence will tend to recall and make permanent in this country the undying beauty of the gardens of Italy.

THE NEW CHICAGO TRIBUNE BUILDING.

TAKING the place of a six-story structure, built of red sandstone, with concrete and iron floors, and when finished, in 1872, perhaps the most substantial building in Chicago, Architects Holabird & Roche have just completed for the Tribune Company a seventeen-story building that is in many respects phenomenal, even among the great office buildings erected in the past decade.

The foundations of this building are of such interest, in extent and plan and material, that only a somewhat detailed



VIEW YEOMAN'S EJECTOR AND SWITCHBOARD.

description will give an adequate idea of their extent, for it is in this basement and subbasement that Chicago architects find object lessons valuable to themselves and their future clients.

Time was when any kind of basement in downtown Chicago was a venture. To-day a basement thirty feet deep, with a floor eighteen feet below the level of the lake, is unique, but no longer problematical and no longer an experiment. And yet Architect Holabird, speaking for his firm, said of it:

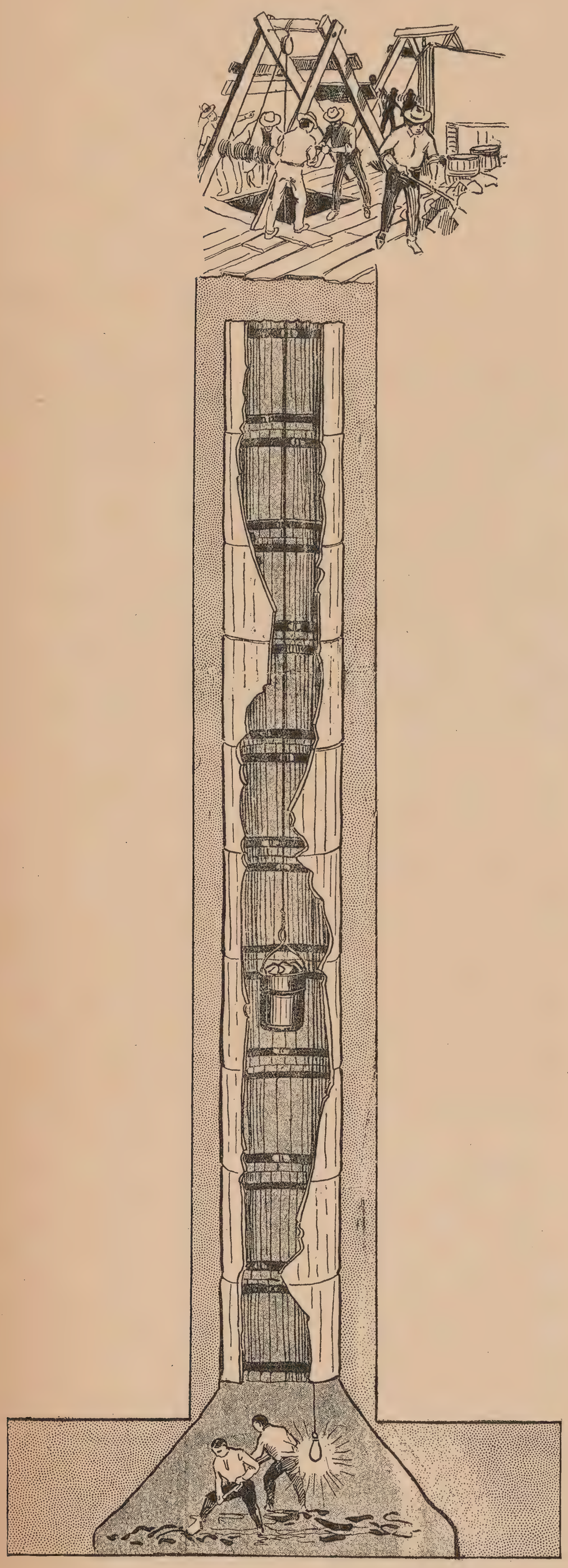
"We started out thinking that we knew a great deal about the subject, but we ended the work finding that we had learned a great deal, and that we still have more to learn of it. The art of using concrete and concrete and iron is in its infancy in this country, and in our opinion it is the coming form of construction. It is now perfectly practicable to build tall buildings of steel and steel and concrete, making the outer walls, floors and partitions of these materials, and at the same time leaving the building strong, fireproof and sightly.

"Perhaps this work, now completed in the new Tribune building, will be the logical development of a new style of building indigenous to this country, for it is here only that we are likely to find architects broad enough to depart from ancient forms and to attempt a new development."

To make direct connection with the presses without the use of belts and pulleys it was considered necessary to put the electric plant below the steel floor of the pressroom. The problem then was whether to have the pressroom ceiling rise above the sidewalk level into the building's store space or whether to sink it all below the pavement level. With the idea for putting it all below the street grade trouble began. Old basements in the older

buildings had averaged eight feet in depth; in some of the newer ones ten foot ceilings had been the limit.

The architects, however, had the experience that came of sinking caissons downtown, and after an office discussion it was



SECTIONAL VIEW OF CAISSON IN THE FOUNDATIONS OF THE NEW TRIBUNE BUILDING.

declared possible to sink such a basement as the needs of the *Tribune* required. Eighty feet below the surface the underlying rocky stratum had been found and the formations between that and the surface had been tabulated. But test borings on the *Tribune* site showed a good many strata to be out of place; the rock bed itself was found 106 feet below the surface.

In general, the blue clay was found for forty feet below the level of the proposed subbasement floor. It was certain that no water would rise through this material, as blue clay always has been regarded as the best of materials for cofferdam filling. The clay was found to be uniform in texture and of the consistency of modeler's clay.

In digging the *Tribune* basement, 90 by 148 feet, water troubled for the first fourteen feet; at fourteen feet the blue clay was encountered and no water came through that stratum, either from the sides or below. As a matter of fact, it was necessary to wet this blue clay in order to cut through it and to dump it readily from the shovels.

While this great hole was being sunk the method of retaining the sides of it was in driving sheet piling, tongued and grooved, so as to back up especially such sides as were inclined to slip in. Wherever this disposition to slip developed, horizontal bracing was put against the tongue-and-grooved walls, and jackscrews used to force the whole mass back to place.

Having the excavation, the type of wall to be used was another question. The Boston subway wall was not satisfactory for the purpose. Neither was a wall consisting of steel beams and concrete. The angle of repose being unknown, and the formulæ in use being uncertain, a compromise wall was finally fixed upon.

In this "compromise," the concrete of the floor supports its share of the weight of the sidewalk and the mailing balcony. The main curb wall, west and north, is supported upon piles driven fifty feet into the ground; the dwarf walls rest upon the clay, and the alley wall and the south wall rest directly upon the caissons. This distribution of weights was made because of the fear that these walls, resting on the clay only, might settle, while the walls resting on the caissons would hold their place, thus making trouble.

In walling in the basement, as well as filling the caissons, the concrete used was made of Lehigh Portland cement, furnished by the Garden City Sand Company, mixed with sand and limestone, and mixed in a machine of new type, giving perfect satisfaction. The success of this work has probably established the fact that foundations of caissons will be largely used in future Chicago construction. A. W. Smith & Sons executed the contract.

The concrete, as well as that of the asphalt floors in the subbasement and fan rooms, also the asphalt pavement of the alley and shipping space, the concrete arch, sidewalks of the entire frontage, and the concrete work on all the floors and on the roof was laid by Stamsen & Bloom, of Chicago, who were the pioneers in concrete and rock asphalt pavements in the city.

In building the walls the sheet piling was left standing as it had been driven. Between this and the inside wall of concrete and iron, blue clay was "puddled" to a thickness of three feet, leaving street walls impervious to water. Drainage was provided for, however, as stated, all drains being on the inside and leading to a central pit in the subbasement, from which a duplex pump is ever ready to remove possible seepage, or flood water.

The total depth of these basements is 29 feet 6 inches, with the ceiling of the pressroom 18 inches below the level of the sidewalk. In the clear the basement is 90 by 148 feet and 18 feet high; the subbasement is 80 by 128 feet and is 7 feet high in the clear. The ceiling of the basement proper is clear of all pipes and its dimensions give room for one more great octuple press on the floor, while the height of the room is sufficient to meet any probable changes in press building for years to come. Practically, this basement has been made three stories high. Naturally this basement and subbasement presented the most serious problem of drainage and sewage disposal in the city owing to the very unusual depth of the basement. The simplicity, economy of operation and very small space requirements of the Yeoman Duplex Ejector commended this system to the architects.

All the mechanical devices relative to this ejector are self-contained, there being no belting, grooving or transmitting of power to the working parts, they being directly connected with the electric motors which supply the power.

The ejector is located in a pit in the boiler-room, the motors only projecting above the floor level, the switchboard being attached to the wall adjacent, the other mechanical devices being below the floor. The ejector, therefore, takes up only the floor space required by the pit, namely, an eight-foot diameter circle. Its capacity is 150 gallons per minute from each unit, or 300 gallons per minute total. All drains which will not discharge into the sewer by gravity are led to the ejector, including all water-closets below the sewer line — drips, boiler blow-off, seepage water, etc. This is discharged into the sewer automatically and noiselessly, the vertical lift being 35 feet. The ejector is equipped in such a way that if the pit should fill up under flood conditions it can be pumped out quickly by the ejector pumps by opening two valves at the floor level. One unit is sufficient under normal conditions to take care of the service — operating about one minute in every ten. Should the service increase to such an extent that this unit could not meet the demand the duplicate pump starts automatically and both operate together until the normal flow is resumed, when the single pump continues as before.

Above the foundations the ordinary construction in general practice in steel buildings was pursued, but with the best of materials. The fireproofing is one of the best examples ever

placed in a building, the marble in entrances and counting rooms is exceptionally noticeable, and not only has the Northwestern Terra Cotta Company placed its best work on the great cornice that fringes the top of these seventeen stories, but made it the best example of terra-cotta cornice work in the city. While the projection is not exceptionally great for the height of the building, the longitudinal modeling has given the perspective a width that is somewhat deceptive but in perfect proportion. While there are no exceptional constructive features introduced in the modeling or construction of this cornice, its color, proportion and stability will do much toward bringing architects back from the cheap iron and cumbersome stone or brick cornices to terra-cotta, which has all the best features and none of the faults of either.

The exterior walls were substantially "waterproofed" or "weatherproofed." This was one of the contracts in connection with this building which probably attracted as much attention as any part of the work. The exterior face of all the Bedford stone used in the first four stories was treated by the Caffall Paraffin Process of waterproofing. The methods of sealing the stone in which heat is used to force the paraffin into the pores and the finishing work in which compressed air and sand are employed to restore the natural color and texture of the stone, are of interest. This is the process used on the Egyptian Obelisk in Central Park, New York, in 1885, and has just been selected by the Engineering Department for the entire exterior of the new Government printing-office, in Washington, D. C. Perhaps the most notable mark of the desire of the Tribune Company to obtain a building in which nothing can be improved upon is noticeable in the hardware. Mr. O. W. Lockett was entrusted with this by the architects and gave it his personal attention and the result in this too often slighted but in effect probably the most important item in a finished building will be better understood as the years of usage show the value of perfect hardware. The three hundred horse-power internal fired Morrison corrugated furnace boiler was installed by the S. Freeman & Sons Manufacturing Company, of Racine, Wisconsin, who are large manufacturers of standard and high pressure tubular boilers, and if the history of these boilers used in other places where high efficiency and especially economy of space, which was absolutely necessary in this case, is demanded is true it will be many years before even repairs will be necessary, as they are of the highest type of furnace boilers known. They are heated by Hawley down-draft furnaces, which are compact in construction and have been long known as most economical and reliable steam producers and seem to fit the requirements of the Morrison boiler perfectly.

In the electrical equipment for operating the presses for the Chicago *Tribune,* some very startling innovations were made. There are seven double quadruple combination octuple presses, each having a capacity of 96,000 eight-page papers per hour, and each weighing over one hundred tons. The electrical system designed and installed by Messrs. Kohler Brothers, Fisher Building, Chicago, especially for the *Tribune* plant, while apparently complex to the ordinary observer, is on the contrary so simple in its operations that the pressman can start, slow down or stop these ponderous machines from any one of fourteen push-button stations located on each press.

This great mass of machinery, by means of these push-buttons, can be started and stopped within the time required to move the press only 1-32 of an inch. The press can be turned to any required distance and stopped, or it can be run at slow speed continuously, or it can be run at a higher speed, or up to maximum speed; or if the operator thinks it is running too fast, the speed can be reduced, or the press can be instantly stopped, and all this by the mere pressing of a button. At each push-button station is a safety switch, so that if the pressman, turning his press to a certain point, stops it and then desires to work in the machinery, he turns this safety key and while the safety key is turned no one can move the press and injure the pressman. No such perfect control has ever been devised before. The particular presses in the Chicago *Tribune* are different from any other presses in the world and are so arranged that half may run off an edition while the other half is running at slow motion, or vice versa, or the entire press can be run as a unit.

The beauty of the Kohler Brothers system will be seen when it is understood that no matter what portion of the above combination the pressman desires to make, it is not necessary for him to regard the electrical control at all, but the instant that his press is mechanically arranged for one of the above combinations, the necessary electrical requirements to operate it according to the way he wishes to run are instantly and automatically completed. In other words, this equipment does the thing. Accident to workmen is almost impossible. It saves time, saves labor, saves power and saves paper, and altogether the electrical press equipment of the Chicago *Tribune* is a wonder.

The rapid progress made upon this building was largely due to the efficiency of the hoisting elevators of the Thomas Elevator Company, who seem to have a practical monopoly in this line of work.

It is a matter of history that this building illustrates the rapid changes which take place in building construction in Chicago when a substantial stone structure is taken down and succeeded by one of steel three times its height, that it reaches into the ground further than excavation has ever been made before below a Chicago building, and all this to keep pace with the requirements of modern business methods.

THE FALLEN CAMPANILE.

IT was with a sense of incredulity, of hardly believing our own eyes, that many of us must have read the announcement in the papers, says *The Builder,* of the Fall of the Campanile of St. Mark. The catastrophe came upon the world so suddenly and without warning, for the sign of some instability of the tower. and the precautions which had just been taken to warn people away from its immediate vicinity, do not seem to have made their way to public notice much beyond Venice. It is a strange fate that this sudden collapse should be the end of an erection of which Fergusson rather harshly observed that "its size, its height, and its apparent solidity, are its only merits"; and on which only a few days ago the writer of an article on "Impressions Venitiennes," in the *Revue Générale,* observed that "*son énormité fruste avait, sous le baiser lumineux du matin, un air d'héroïque jeunesse.*"

From first to last the life of the tower counts almost one thousand years, for it was founded by Tiepolo in 902, but this only represents the life of the foundations and of the lower portion of the structure, not of the whole as we have been accustomed to see it. From some reason or other, very likely connected with intestine warfare and the consequent unsettled state of things, it took the Venetians two hundred and fifty years to carry it up to the then lantern or cella stage, and another quarter of a century to finish the cella. Fergusson, in his "History," suggests that at this period its general appearance was probably very similar to that of the tower of Piacenza Cathedral; a plain stalk with long pilaster-like features, an arcaded belfry stage and a short circular spire planted on the top of this. But the Campanile, though called in ordinary parlance the Campanile of St. Mark's, has really no connection with the basilica, and is not so much a church tower as a civic tower, an emblem of the power of Venice. Hence it was thought, in after time, that it was not large or resplendent enough for the occasion, and the whole of the arcaded story was rebuilt, probably the cornice below much increased in scale and dignity, and the awkward-looking square box stage was built over it, apparently simply as a means of gaining height, for it has no architectural significance and certainly no architectural beauty. The existence of this box story seems sufficient to show that the stalk of the tower was not raised, and that the arcaded story was at the same height as the original one; for if they had commenced raising the stalk higher they would surely have continued that much better and more architectural method of gaining increased height. But the tale told by the structure seems to us to be, that the arcade story was first rebuilt at its old height, merely to give it a more ornate and sumptuous appearance, and afterward came the conviction—"It is not high enough; we must raise it further"; and so followed the interposition of what we call the box story between that and the square spire which was to be the ultimate crown of the edifice. All this was done about 1510 by Maestro Buono, who decorated it with marbles brought from Greece and from other parts of Italy, in accordance with the long-entertained covetous habit of the Venetian Doges in regard to the rich materials owned by other States.

The esthetic judgment of Fergusson on the tower, though as observed it sounds harsh to minds full of the spell of Venice, is, we think, correct. The Campanile had gained a kind of glamour from its association with the wonderful city, and its proximity and nominal association with a building of such romantic beauty as St. Mark's, not to speak of the other structures of world-wide fame contiguous.

Whether we shall ever have positive evidence as to the cause of the disaster is doubtful, as the fall has destroyed the evidence, unless the deep foundation may have any evidence to give of recent disturbance. In the Institute library is a paper in Italian by Signor Boni on the foundations of the tower, with a section, from which it appears that there was a carefully prepared foundation of stone blocks on the top of the inevitable piling, and we see that doubts are expressed in some quarters as to whether the mischief really lay with the foundations.* Our own impression, however, is that the ground had probably moved below or with the piling, and that the state of the substratum of the soil of Venice is a matter for very serious consideration, in view of the safety of buildings even more precious than the Campanile. Considering what a thickness of soft and easily disturbed material must exist at Venice, between the ground surface and the uppermost firm stratum that can be arrived at, one can easily imagine how operations in dredging, and other disturbances of the ground, might cause a lateral movement of the subsoil, which would naturally make itself first felt under the heaviest structure.

IN applying for a permit to erect an eleven-story building in Cincinnati by the ferro-concrete or Ransom process, architects Anderson and Elzner stated that the problem of a building five hundred feet high by this process had been demonstrated by plans and its stability certified to by competent engineers. The permit for the eleven-story building was granted and the entire structure will be cast in sections upon the site, including walls and supports.

*One authority says that the foundations were of 10-inch white poplar, upon which was laid a layer of white poplar planks and upon these trachyte from the Euganean Hills was cemented. As late as 1885 the foundations were examined and found to be in good condition.—ED.

RAILWAY DEPOTS THAT HARMONIZE.

THE time when any railroad desiring a depot or station built a one or two story affair, with a hip roof and usually of pine lumber and painted it red, has passed, to a great degree, and the great trunk lines vie with each other in giving to the public the best that architectural talent can produce. Among the first to recognize this was the Southern Pacific Railway, and its passenger stations are all superb in their design and appointments and each is designed according to the locality and its climatic conditions.

There is no railway system in the world that traverses a greater number of degrees of latitude and, in its extent, gives to the traveler a greater variety of scenery than the Southern Pacific Railway in its route from New Orleans, on the southern coast of the United States, to Portland, Oregon, at its most northwestern boundary. While at its southern terminus the climate is not positively tropical, it has all of the features of more southern latitudes, and at its northern extremity the temperate zone is about to be merged into the glacier fields that approach the country of perpetual cold, so that the traveler need not seek the Baltic sea and traverse the breadth of Europe and cross into the Indian ocean to experience the changes

NIGHT VIEW OF SOUTHERN PACIFIC R'Y STATION AT PORTLAND.

of climate and the accompanying natural phenomena of plain, mountain, woodland and lake, for where can he observe greater plains than those of Texas, more arid deserts than those of Arizona, or greater or more picturesque mountains and valleys, or richer harvest fields than in the long coast of California, which this road traverses from end to end? The productiveness of the earth can be well sampled from the storehouses of nature upon this great route; all its grains, all its fruits, and all its mineral wealth. All seasons are alike agreeable to the traveler; but in the winter months, when the Eastern and Northern States are wrapped in snow, this entire route winds through a perpetual summer land, and to the tourist or to the seeker for a home in a country where "The vines are ever fruitful and the weather ever fine," the best that the earth can give in all its broad extent can be found to suit all temperaments and all tastes somewhere upon this great railway system.

A SKETCH OF THE PIONEER AMERICAN VARNISH BUSINESS.

PRIOR to 1827 all the varnish for sale in this country had been imported, although it had been the custom for carriage painters and repairers to make small quantities in their shops for their own use. Pascal B. Smith, who had learned the needs of the carriage painter and also acquired some experience in varnishmaking while working in a carriage paint shop, conceived the idea in that year that a business could be built up by manufacturing varnish for the use of carriagemakers, cabinetmakers and other manufacturing concerns using varnish in their business. Putting his ideas to a practical test, he erected a shed in an old apple orchard near what is now the corner of Second avenue and Sixth street, in New York city, and this small shed was the first varnish factory in America. At first he manufactured in a very crude way, and only in small quantities. After making a few gallons of what he called "carriage varnish," and a small quantity of "furniture varnish," and allowing it to settle for a few days, he would fill as large a can as he could conveniently carry and, taking a small measure with him, would set out to peddle his product to the different carriage painters and other varnish users.

From the very beginning, this venture of Mr. Smith proved a success, and his business increased so rapidly that in 1829 he called to his assistance Mr. James L. Stratton, a practical house painter, and his brother, Samuel P. Smith, who gave up his business of master mason in Albany to become a partner in the new firm of P. B. Smith & Co., varnishmakers. In due time, the venture was reported to the national Government, which then, as now, took a keen interest in the industries of the country. At the present time all candidates for the civil service are taught that varnish, as an American product, was first made and sold in 1828.

Very soon after its organization, the new firm erected a factory at Astoria, on land belonging to Mr. Stratton, establishing their office at 127 Maiden Lane. The business increased so rapidly that some jealousy was created over its management, which resulted in 1832 in the withdrawal of Mr. Samuel P. Smith, who went to Newark, New Jersey, and there established a varnish factory of his own. At this time, Mr. P. B. Smith's half brother, Nathan Smith, was admitted to the firm in place of Samuel.

About the year 1842, Mr. Edward Smith, another half brother of the founder of the business, was the traveling clerk of the house, making yearly trips to the South and West. He started from New York by way of Philadelphia, going from there by stage over the Allegheny Mountains, down the Ohio and Mississippi rivers as far as New Orleans, stopping at the principal towns on his way, and then back again as far as St. Louis by boat. From this point he would cross the country by stage to Chicago, Detroit, Cleveland and Buffalo, returning home through New York State—a long and arduous journey, with many hardships that the traveler of the present day can not even imagine. At that time all goods for Cincinnati, Louisville, Pittsburg and St. Louis were shipped by sailing vessel to New Orleans and were then forwarded by river steamboats to their destination. Goods for Buffalo, Cleveland, Detroit, Chicago and the other lake towns were shipped by way of the Erie Canal to Buffalo and thence by sailing vessel across the lakes. Interior towns were either reached by canal or, where this means of communication was unavailable, were transported by team over the ordinary roads. The large sales were made in the spring and fall, and the firm's customers usually paid occasional visits to their office. Shortly after this, Mr. Edward Smith was taken into the firm.

In 1844, the prosperity of the business had grown to such an extent that Mr. Pascal B. Smith retired from the firm, having accumulated what in those days was considered an immense fortune. Edward Smith was admitted as an equal partner, and the firm name became Edward Smith & Co. This name continued until 1850, when on the death of Nathan Smith, it was changed to Smith & Stratton. At this time the office was moved to 141 Maiden Lane, where it continued until the death of Mr. Stratton, in 1859.

In 1856, the factory was moved from Astoria, the firm having purchased from Union College six lots on Fourth and Fifth streets, Hunter's Point, where they erected the first buildings used for manufacturing purposes in that neighborhood. The deed of the property contained a protective clause against molestation on account of harmful odors, etc. Upon completion of the factory buildings at Hunter's Point, several two and three story apartment houses were erected on Fifth street for the employes. In one of these Mr. Richard Armstrong, for many years chief varnishmaker, was born.

The year 1856 was also marked by the entrance of Mr. J. A. Elmendorf into the employ of Smith & Stratton. He continued his connection with this firm and its successors until his death in 1900, at which time he was vice-president of the present corporation.

In 1867, Mr. Elmendorf was made a partner by Mr. Smith, and the firm name was again changed to Edward Smith & Co., which still continues as the style of the business. In November, 1878, Mr. Edward Smith died, and his son-in-law, Mr. Chester Huntington, took his place in the firm, the partners being Mr. Elmendorf and Mr. Huntington. In 1880, Mr. Alexander Maitland became a member of the firm, and in 1889 the business was incorporated under the same name, the officers being: President, Alexander Maitland; vice-president, John A. Elmendorf; treasurer, Chester Huntington; secretary, A. M. Bates, and superintendent, S. V. V. Huntington.

In 1892, Mr. Chester Huntington retired as an officer of the corporation, and S. V. V. Huntington was elected in his stead, since which time he has filled the position of treasurer and manager.

In the earlier days of varnishmaking, Zanzibar, Benguela, Angola and Pebble gums were used almost exclusively. Afterward, Manila gum came into the market for the cheaper varnishes, until the extensive importation of Kauri gum, which was first used in varnishmaking by Smith & Stratton. The first lot came to this country direct from New Zealand about 1846. A ship had gone to New Zealand on a trading venture, and after the captain had disposed of his cargo, he found the vessel without ballast to sail back. On looking for something to load his ship with, he found a great quantity of this Kauri gum piled up in one of the towns, and made up his mind that it could be used for some purpose and at once bargained for it. He loaded his ship with it and sailed for home. On his arrival, he could find no purchaser. He therefore hired a barn near New Bedford, Massachusetts, and filled it with the gum. Some two or three years after, an Irish-Englishman by the name of John Boyd took hold of the lot and came to Smith & Stratton with samples. After testing the gum, they purchased the first hundred thousand pounds for 2½ cents per pound. The gum became in immediate demand and the whole was disposed of at continually advancing prices. Smith & Stratton purchased the last ten thousand pounds of the cargo at 35 cents per pound. In 1853, after Kauri gum became a regular article of importation into this country, the price began to fall again, until it reached 5½ cents, in 1860.

The original kettle which Mr. Pascal B. Smith used for boiling his varnish when he first began business in the shade under the apple trees, is still preserved in the office of Edward Smith & Co.

PAINTS IN ARCHITECTURE.

VARNISH IN ZINC.

IT is not generally known that even a small proportion of good kauri gum varnish in the oil — not enough to affect the gloss perceptibly—materially changes the physical character of pure zinc white. The varnish should be added to the oil before grinding the zinc in it, so as to insure perfect assimilation, and the oil, to give the best results, ought to be a refined varnish oil, not ordinary raw linseed oil.

The zinc not only acquires more body, so that two coats will do the work ordinarily accomplished by three, but the paint is more tenacious and works far more easily under the brush, while it seems to be and to remain tough and elastic.

The explanation I presume to be that a small proportion of the zinc combines with the gum to form a resinate. Anyway it is a fact well worth the attention of architects.

CHARLES JOURDAIN.

OUR ILLUSTRATIONS.

Residence of John Parkinson, Architect, Los Angeles, California.

The Tribune Building, Chicago. Holabird & Roche, Architects.

Residence at Denver, Colorado. Thomas, Dryden & Thomas, Architects.

Views of Leamy House, Mt. Airy, Pennsylvania. Cope & Stewardson, Architects, Philadelphia.

Design for Carnegie Public Library, Kenneth McDonald and J. F. Sheblessy, Architects, Louisville.

Detail of Porch, Residence of Allan Reed, Wayne, Pennsylvania. W. L. Price, Architect, Philadelphia. The Stable also is shown.

Residence of Jos. Milbank, Port Chester, New York. Howard, Cauldwell & Morgan, Architects, New York. The views shown are: Front View of House; Side View of House; Gate Lodge and Gateway; Stable; Bath House.

Photogravure Plate: Residence of Henry Logan, Wayne, Pennsylvania. D. K. Boyd, Architect.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

Roxbury Courthouse. Francis Allen & Vance, Architects.

Technology Chambers, Boston, Massachusetts. Kilham & Hopkins, Architects.

New Runkle School, Brookline, Massachusetts. Peabody & Stearns, Architects, Boston.

Institution for Savings, Roxbury, Massachusetts. Peabody & Stearns, Architects, Boston.

Apartment Building, New York city. Harde & Short, Architects. Two full page plates are given.

Residence of Chas. H. Whiteman, Brookline, Massachusetts. Shepley, Rutan & Coolidge, Architects, Boston.

ASSOCIATION NOTES.

ARCHITECTURAL LEAGUE OF AMERICA.

The Exhibition Committee of the Architectural League of America have issued a circular letter of some length and detail to the clubs urging coöperation in the work of collecting as a special exhibit in the coming exhibition photographs representative of American church work. The circular states that interest in this field has been aroused in Europe, and many church dignitaries have expressed themselves upon the necessity for a greater enthusiasm and larger education among architects. Through the coöperation of European societies having the betterment of church architecture in view the league will be able to exhibit a representative collection of photographs of foreign churches. A special committee of the league has been given charge of the department of semi-public buildings and this committee will give the exhibit of churches special attention. It is suggested by the league committee that each club select one representative to take charge of the collection of church architecture, aside from the collection of photographs and drawings for the general exhibition, and that they be forwarded to New York by October 20.

ILLINOIS CHAPTER A. I. A.

The Annual Meeting of the Illinois Chapter of the American Institute of Architects was held at the Art Institute, September 15, President W. L. B. Jenney occupying the chair at the head of the banquet table, around which were gathered an enthusiastic company of Chicago architects. As is the custom in meetings of this Chapter, the proceedings begin with a dinner. The principal business transacted was the election of officers, but preliminary to this Secretary George Beaumont read his report of the year's work, in which an interesting account of the success met with and the appreciation manifested by the mason apprentices during the two months' term of lectures upon building subjects, given by members of the Chapter last winter. The new officers are: W. C. Zimmerman, president; John M. Van Osdel, first vice-president; H. B. Wheelock, second vice-president; George Beaumont, secretary; Normand S. Patton, treasurer. After the election S. A. Treat gave an interesting account of his travels in Europe during the summer, where he saw a church that he seemed to have met before in Chicago and a church clergyman who was the double of a Chicago newspaper man, and the talk became general upon Roman construction, mosaics and the use and quality of cement, President Jenney stating that even this non-shrinkable article was made by a firm in Chicago, until some one discovered that the hour was late, and the most enthusiastic, best attended and altogether valuable meeting the Chapter has enjoyed in a long time came to a close. It was a meeting that demonstrates that no member can afford to miss the sociability and exchange of thought which always makes valuable a Chapter meeting.

SAN FRANCISCO CHAPTER, A. I. A.

At a meeting of the San Francisco Chapter, American Institute of Architects, held July 11, the following resolutions relative to employing an Eastern architect to prepare plans for the new building for the Merchants' Exchange were unanimously adopted:

Resolved, Whereas, the Merchants' Exchange having made application to the Honorable Board of Supervisors for special permit to erect a twelve-story building, Class A, in excess of two hundred feet, would seem to confirm the current report that an Eastern architect has been employed by them to prepare the plans without competition from the local profession, and

Whereas, The San Francisco Chapter, A. I. A., having in view the welfare and material prosperity of the State and the encouragement of all professions located therein, view with regret that a semi-public body representing the commercial interests of the community should ignore and set aside all consideration for architects practicing in their own city, and not living up to the implied object of all public-spirited citizens to stimulate and encourage professional ability and talent at home, and

Whereas, The San Francisco Chapter, A. I. A., having endeavored by correspondence to obtain definite information from the Merchants' Exchange as to the truth of these reports, and having thus far only received courteous acknowledgment of receipt of communication, therefore

Resolved, That a copy of these resolutions be forwarded to each individual director of the Merchants' Exchange and to the press of San Francisco.

MOSAICS.

ARCHITECTS Carrère and Bruner, of New York, and Burnham, of Chicago, have been appointed by the Governor of Ohio as a commission for the supervision of the arrangement of site for public buildings known as the "group plan" at Cleveland.

REPORTS from Puget Sound show that the supply of red cedar suitable for shingles is becoming smaller every year, and that manufacturers will soon have to go to Alaska for cedar logs. New appliances have so greatly increased the output of mills that last year 5,000,000,000 shingles were cut in Washington and Oregon.

"FIREPROOF BUILDINGS" is the title of an attractive brochure just issued by the Roebling Construction Company and presented by the resident manager at Chicago. It is a printed album of halftone plates of 63 buildings, from the largest fire-proof commercial structure in the world to the smallest uses to which fireproofing is applied and contains a list of the structures fireproofed by the concern during the past two years, located in many countries and parts of the globe. Besides demonstrating the extensive use of this system of fireproofing buildings the booklet is valuable as a collection of designs of varied degree and purpose.

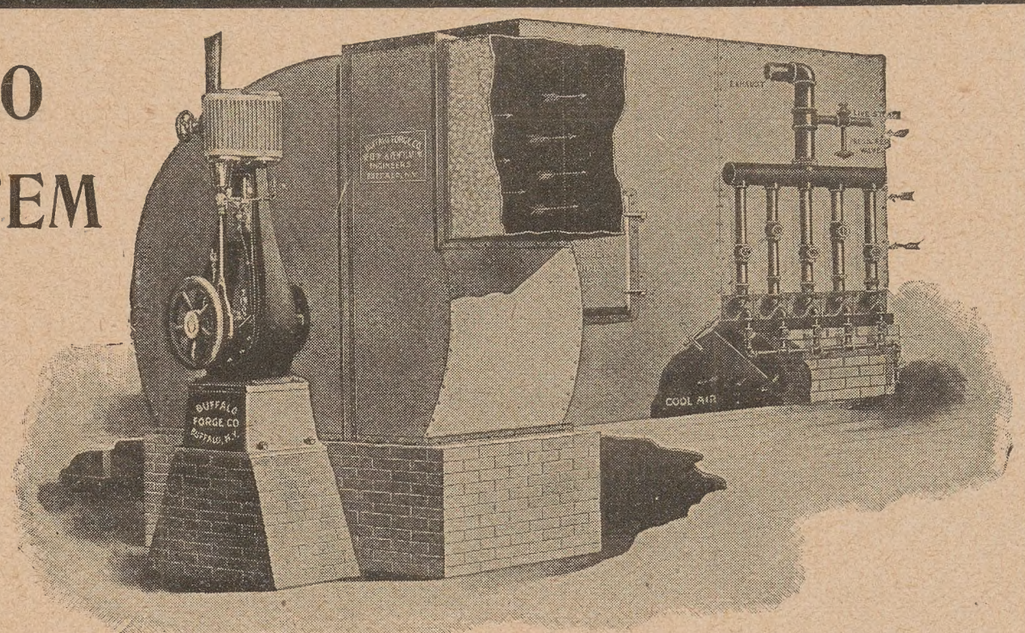
MR. ALFRED WATERHOUSE, R. A., recently completed his seventy-second year. His life as an architect has been full of activity. Manchester has built from his designs the Assize Courts, Owens College, the Town Hall, and St. Mary's Hospital. Oxford owes to him a large part of Balliol College, and Cambridge is similarly indebted for Caius and Pembroke Colleges, and Foster's Bank. In London his monuments are the South Kensington Museum, the National Liberal Club, University College Hospital, the Central Technical Institute, St. Paul's Schools, and many banks and insurance offices. He is also the architect of Eaton Hall, Chester, and many other mansions. His little spare time he devotes to painting in oil and water-color.

SUPERINTENDENT OF BUILDINGS STEWART, of New York, when told that charges had been preferred against him for neglecting to enforce violations of the building ordinances, says the New York *Telegram,* of July 17, declared that he courted the fullest investigation of the matter and wanted the public to know all about it. "The statements that are made concerning the St. Regis Hotel, the Hanover Bank building and Lord's Court are absolutely nonsense, rot and rubbish. I dare and defy anybody to prove that wood treated with any chemical composition is fireproof or will retard same. This agitation over fireproofed wood was started before I assumed office and it has been forced upon me. I want to see this whole matter threshed out and now is a good time for it." Legal action has been taken against Superintendent Stewart by a taxpayer who represents building firms opposed to his policy. For some time violations have been placed on the new building to be known as the St. Regis Hotel, of Fifty-ninth street and Fifth avenue; the Lord's Court building, at No. 27 William street, and the Hanover National Bank building, at Pine and Nassau streets, owing to the claims made by the superintendent that wood not fireproof was being used where fireproof material was called for by law. These violations have not been vacated, but it is alleged that the work has continued the same as usual, with the superintendent's knowledge.

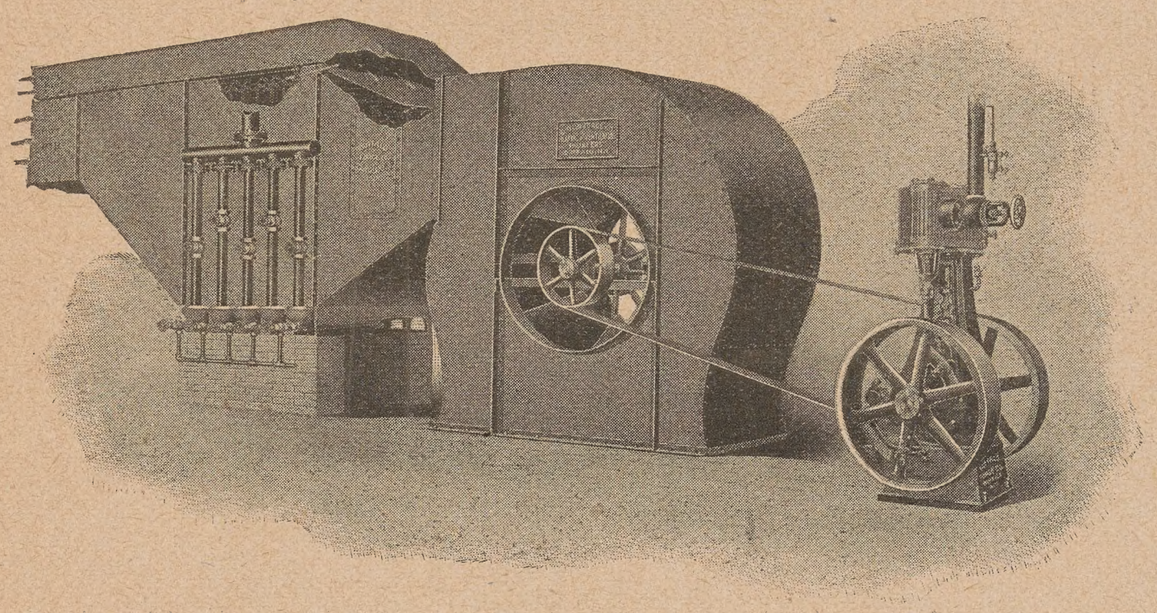
BUFFALO FAN SYSTEM

OF

Heating, Ventilating AND Drying



INSURE ADEQUATE AIR SUPPLY. GIVE PERFECT TEMPERATURE CONTROL
PERMIT EASY REGULATION OF HUMIDITY.



BUFFALO FORGE COMPANY,

CHICAGO OFFICE, 22-24 RANDOLPH ST. BUFFALO, N. Y. NEW YORK OFFICE, 39 CORTLANDT ST.

The improved Shingle Stain and preservative. Imparts an artistic finish to shingles and prolongs their life by penetrating the pores of the wood and retarding decay.

SHINGLETINT is made in all desirable shades, is easily applied, the colors are permanent, and money is saved by its use.

Full information and finished samples of wood mailed free for the asking.

BERRY BROTHERS, Limited
Varnish Manufacturers, DETROIT, MICH.

NEW YORK BOSTON CHICAGO
CINCINNATI PHILADELPHIA
ST. LOUIS BALTIMORE SAN FRANCISCO

THE Flexible Roofing

M F Roofing Tin not only has a very heavy coating of pure tin and new lead, but it is the most flexible and easiest worked of all roofing tin. This property of M F Roofing Tin permits perfect fitting around angles of roof, corner or chimney—no waste of time or material.

M F Roofing Tin

is so carefully made, by hand labor, and so many precautions taken to send out only perfect plates, it invariably makes a roof that will last half a century or more. This (MF) trademark stamped on every sheet.

Ask your roofer for M F Roofing Tin, or

write to { W. C. CRONEMEYER, Agent, Carnegie Building, Pittsburg,

for illustrated book on roofing.

American Tin Plate Company, New York.

"Big Four" Route.

CHICAGO

TO

INDIANAPOLIS,
CINCINNATI,
LOUISVILLE.

SOUTH and SOUTHEAST

THE SCENIC LINE TO

Hot Springs, Va., and
Washington, D. C.

Via the

Chesapeake & Ohio R'y.

J. C. TUCKER, G. N. A.
234 Clark Street, CHICAGO.

.....WANTED.....

Two experienced structural steel draftsmen.

RUSSEL WHEEL & FOUNDRY CO.
DETROIT, MICHIGAN

SPECIFICATION REMINDERS

BRICK

Enameled.

Fire.

Ornamental.

Paving.

Porous.

Pressed.

Sewer.

CEMENTS

Domestic.

Imported.

Portland.
Garden City Sand Co., 188 Madison St., Chicago.

Utica.

CLOTHES DRYERS

Chicago Clothes Dryer Works, 65 S. Canal St., Chicago.

CONTRACTORS

General.
Clarence I. Wolfinger, 164 LaSalle St., Chicago.

DECORATIONS

Interior.

Iron.

Lincrusta Walton.

Marble.

Plaster.

Stone.

Wood.

ELEVATORS

Electric.
The Winslow Elevator & Machine Co., 96-100 N. Clinton St., Chicago.

Freight.

Hydraulic.
The Winslow Elevator & Machine Co., 96-100 N. Clinton St., Chicago.

Passenger.

Steam.

Water Balance.

FIRE BRICK

Garden City Sand Co., 188 Madison St., Chicago.

FIREPROOFING

Monier Construction.

Tile and Concrete.

Wire, Metal and Lath.

FLOORS

Hardwood.
Acme Parquet Floor Co., 4703 Cottage Grove Ave., Chicago.
E. B. Moore & Co., 37 Randolph St., Chicago.
E. R. Newcomb, 14 Monroe St., Chicago.

Marble.

Mosaic.

Parquetry.
Acme Parquet Floor Co., 4703 Cottage Grove Ave., Chicago.
E. R. Newcomb, 14 Monroe St., Chicago.

Polished Maple.

Rubber Tile.

Tile.

White and Yellow Pine.

GLASS

Ornamental.
Schuler & Mueller, S.W. cor. Madison and Canal Sts., Chicago.

Plate.

Prismatic.

Sheet.

Stained.

HEATING

Electric.

Furnace.
Robinson Furnace Co., 107 Lake St.

Steam and Water.
William A. Pope, 79 Lake St., Chicago.

Steam and Hot-Water Boilers.
Kellogg-Mackay-Cameron Co., General Offices, Chicago, Minneapolis, Minn., Kansas City, Mo.

Valves, Boilers and Radiators.
Western Valve Co., 43 W. Randolph St., Chicago.

INTERIOR FINISH

Clarence I. Wolfinger, 164 LaSalle St., Chicago.

IRONWORK

Doors.

Jail-Work.

Ornamental.

Shutters.

Stairs.

Structural.

LIGHTING

Electric.
Wagner-Bullock Electric Mfg. Cos., 1624 Marquette Bldg., Chicago.

Fixtures.

Gas.

Gas Machines.

MOLDINGS

Brick.

Composition.

Iron.

Marble.

Plaster.

Stone.

Wood.

MOTORS

Electric.
Wagner-Bullock Electric Mfg. Cos., 1624 Marquette Bldg., Chicago.

PAINT

ROOFING

Felt.

Iron.

Shingle.

Slate.

Tar and Sand.

Tile.

Tin.

SAND

White.
Garden City Sand Co., 188 Madison St., Chicago.

SASH LOCKS

Harlev Burglar Proof Ventg. Sash Lock Co., 92 La Salle St., Chicago.

STONE

Granite.

Indiana Oolitic Limestone.
Perry-Matthews-Buskirk Stone Co., Chamber of Commerce Building, Chicago.

Sandstone.

TERRA COTTA

Enameled.

Ornamental.

Porous.

TILE

Opalite.
W. T. Carter & Co., 305 Dearborn St., Chicago.

VENTILATION

Fan System.
Garden City Fan Co., Chicago.

NATIONAL
FIRE PROOFING COMPANY
STANDARD METHODS OF
HOLLOW AND POROUS TILE
FIREPROOFING
OFFICES
FRICK BUILDING - - - - - - PITTSBURGH
170 BROADWAY - - - - - - - NEW YORK
NORTH AMERICAN BUILDING - - PHILADELPHIA
TREMONT BUILDING - - - - - - BOSTON
HARTFORD BUILDING - - - - - CHICAGO

PIONEER
FIRE-PROOFING COMPANY
1515 Marquette Building
CHICAGO
CONTRACTORS FOR FIRE-PROOFING
OF BUILDINGS
MANUFACTURERS OF CLAY PRODUCTS

Mr. Architect: REASONS WHY YOU SHOULD USE

Dexter Brothers' English Shingle Stains

BECAUSE they will outwear paint or any other stain.
BECAUSE they preserve the shingle.
BECAUSE they do not give a painted effect to the shingle.
BECAUSE they do not change as other stains do.
BECAUSE they have no disagreeable odor.
BECAUSE they are used on the best work from Maine to California.
BECAUSE they are used by people who want the best of everything.

Exclusively used on the shingled country houses of *Mr. George Vanderbilt* at Biltmore, *Mr. J. Pierpont Morgan*, Adirondacks, *Hon. Wm. C. Whitney*, Westbury, L. I., *Mr. Thomas W. Lawson*, Egypt, Mass.

Manufactured by

DEXTER BROTHERS
103-105-107 Broad Street
BOSTON

H. M. HOOKER CO., Agents
57 W. Randolph Street
CHICAGO

W. S. HUESTON, Agent
81 Fulton Street
NEW YORK

BUTCHER'S BOSTON POLISH
is the best finish made for
FLOORS, BOWLING ALLEYS
INTERIOR WOODWORK and FURNITURE
Circulars sent on application.
MANUFACTURED BY THE
BUTCHER POLISH CO.
356 Atlantic Ave., Boston, Mass.
FOR SALE BY DEALERS IN PAINTERS' SUPPLIES.

IRON and TIN ROOF PAINT
THE PROPERTY OWNER SAVES MONEY WHEN THE ROOF IS PROPERLY PAINTED WITH
DIXON'S SILICA-GRAPHITE PAINT
ADDRESS
JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.

TO LIGHT STORE INTERIORS

use FRINK'S SECTIONAL GLASS CLUSTER REFLECTORS. They are made to last and reflect all the light there is. The most practical fixture made for lighting stores. Throw out a powerful, even light—no dazzling glare in the eyes. Adopted by the Board of Education for lighting the new schools. A large variety of styles and sizes.

I. P. FRINK, 551 PEARL STREET, NEW YORK.

CRANE FITTINGS
ESTABLISHED 1855

CONVENIENT TRAINS
Leave St. Paul and Minneapolis daily
. . VIA . .
Wisconsin Central R'y
. . FOR . .
MANITOWOC,
MILWAUKEE,
CHICAGO,
where direct connections are made for the East and South.
Nearest ticket agent can give you complete information.

JAS. C. POND, Gen. Pass. Agent,
MILWAUKEE, WIS.

E. ELDON DEANE,
ARCHITECTURAL COLORIST, AND ILLUSTRATOR,
63 SEYMOUR BUILDING
Fifth Ave., corner 42d Street,
NEW YORK.

Please mention THE INLAND ARCHITECT when corresponding with Advertisers.

ESTABLISHED 1872 INCORPORATED 1890

ORR & LOCKETT HARDWARE CO.

CHICAGO.

71 & 73 Randolph Street.

MANUFACTURERS, WHOLESALE AND RETAIL DEALERS

Builders' Hardware

ART METAL-WORK OF ALL KINDS.

Cooling Rooms.

Mechanics' Tools.

Table and Pocket Cutlery.

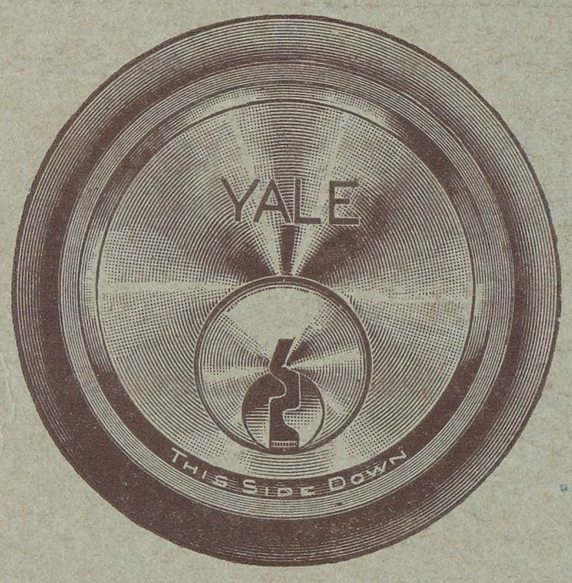
Our selection comprises THE BEST from all the leading factories, as well as our own, and our heavy purchases enable us to offer you these goods at prices which can not fail to please.

We have many specialties which we manufacture and control which can not be found anywhere else.

Orr & Lockett Hardware Co.

71 & 73 RANDOLPH STREET.

Telephone, Central 551.



The Yale Lock

with Paracentric Key affords the highest standard of security, and is made in hundreds of styles and sizes, adapted to almost every possible use, from a jewel-case to a prison door.

Little Brochures, "What is a Genuine Yale Lock," "Yale Night Latches," "Artist and Artisan," etc., will be sent on request.

The

YALE & TOWNE

Mfg. Company.

CHICAGO OFFICE:

131 Wabash Avenue.

YALE & TOWNE MFG. CO. STAMFORD CONN. U.S.A.
YALE
PARACENTRIC
50,000
PAT'D Nov. 2, 1891. July 28, 1891.
PAT'D Nov. 2, 1891. July 28, 1891.
PAT'D Nov. 2, 1891. July 28, 1891.

IF YOU SPECIFY

SAMSON SPOT CORD

You can tell at a glance that no other Sash Cord is substituted. It is warranted to be of the best cotton stock, smooth finish and perfect braid.

SAMSON CORDAGE WORKS

BOSTON, MASS.

Front Doors and Window Sash

and all other woodwork exposed to severe weather conditions need a varnish that is specially made to resist exposure. For all such work you will obtain satisfactory results if you

USE SPAR COATING

TRADE MARK.

EDWARD SMITH & CO.

VARNISH MAKERS AND COLOR GRINDERS.

45 Broadway, New York City,

59 Market St, Chicago.

PIERCE
OUR GRIP
STANDS FOR PERFECTION
HOUSE-HEATING
BOILERS
Have proved safe and reliable in actual operation under the most varied conditions. Supply a mild, equal, health-giving warmth during even the severest weather. May be installed in old buildings as well as new. No dust or ashes in the living rooms of the home.
Write for illustrated catalogue.
Pierce, Butler & Pierce Mfg. Co.
Syracuse, N.Y., U.S.A.
New York, Boston, Philadelphia.

Please mention THE INLAND ARCHITECT when corresponding with Advertisers.